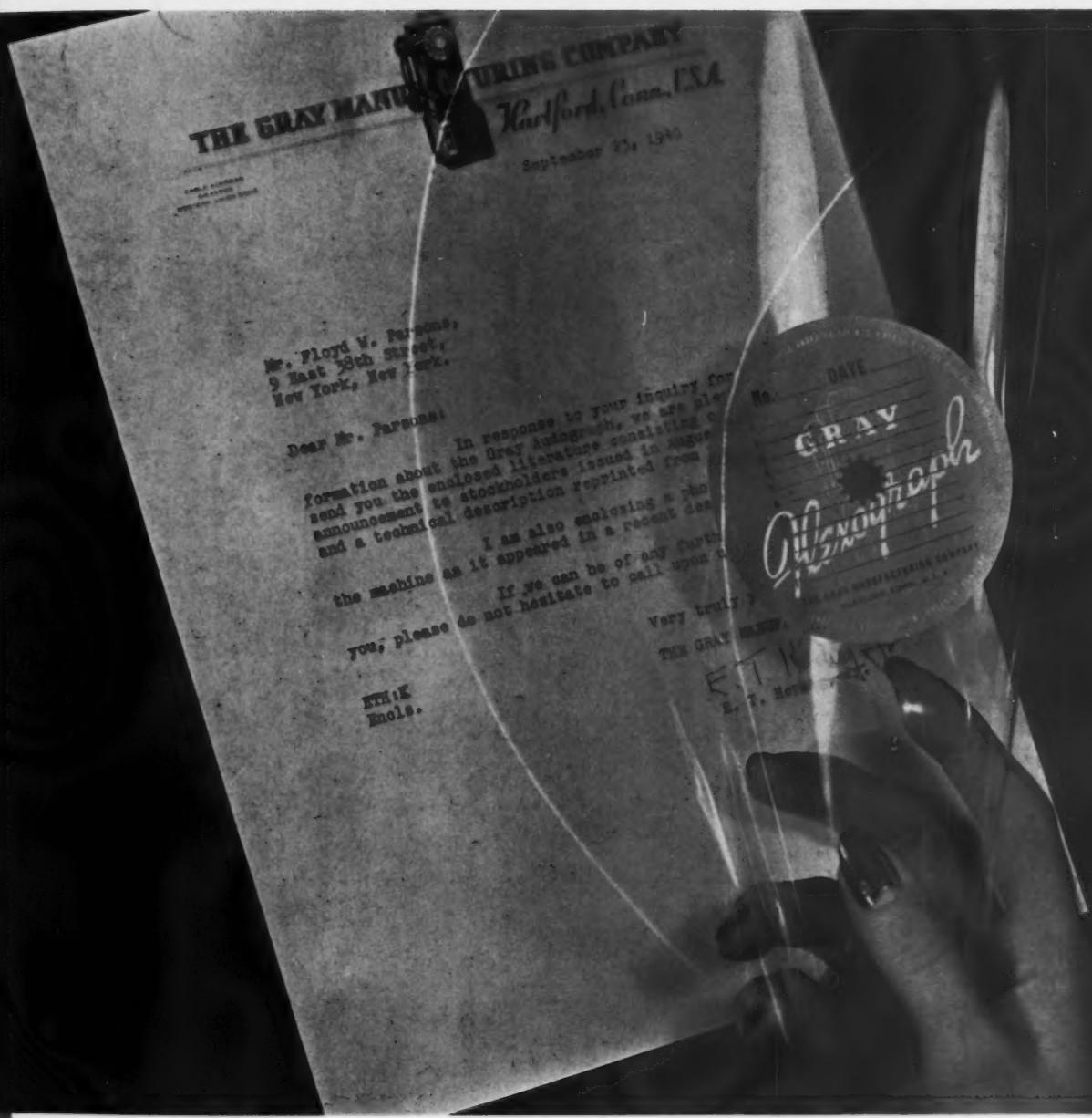


CONNECTICUT INDUSTRY

FEBRUARY
1941



THE GRAY FLEXOGRAPH—a transparent, indestructible, cellulose acetate record .005 of an inch thick of 18 minutes recording capacity for use with the Gray Audograph, the multi-purpose electrical recording machine now nearing commercialization at the Gray Manufacturing plant, Hartford, Connecticut.

In this issue:

THE GRAY MFG. CO. . . . INDUSTRY MEETS
THE CHALLENGE . . . THE WORLD AHEAD
NEW LONDON JUNIOR COLLEGE

News Forum . . . Legiscope . . .
Transportation . . . Accounting
Hints . . . Business Pattern . . .
Hints for Exporters . . . Service Section

T. A. D. JONES & CO., Inc.

NEW HAVEN, CONN.

BRIDGEPORT, CONN.



NEW HAVEN TERMINAL

DISTRIBUTORS

BITUMINOUS COAL

INDUSTRIAL FUEL OIL

SERVING SOUTHERN AND WESTERN NEW ENGLAND

VIA

RAIL—WATER—TRUCKS

FEBRUARY 1941

CONNECTICUT INDUSTRY

VOLUME 19
NUMBER 2

MANUFACTURERS' ASSOCIATION OF CONNECTICUT, INC.

L. M. BINGHAM • EDITOR

OFFICERS

E. KENT HUBBARD . . . President
JOHN H. GOSS . . . Vice-President
H. D. FAIRWEATHER . . . Treasurer
C. L. EVANSON . . Sec. & Asst. Treas.

DIRECTORS

PHELPS INGERSOLL . . . Middletown
R. H. VALENTINE . . . Stafford Springs
G. W. BLUNT WHITE . . . Mystic
ROBERT S. EDWARDS . . . Norwalk
C. L. CAMPBELL . . . Hartford
R. E. PRITCHARD . . . New Britain
EDWIN PUGSLEY . . . New Haven
H. H. RAPP . . . Danielson
F. W. GILBERT . . . New Haven
F. H. MONTGOMERY . . . South Norwalk
A. M. ALLEN . . . Baltic
C. H. CUNO . . . Meriden
A. D. WILSON . . . Bristol
H. G. ELLIS . . . Torrington
O. G. WILLIAMS . . . Winsted
D. S. SAMMIS . . . Bridgeport

ADMINISTRATIVE STAFF

C. L. EVANSON . . . Executive Director
L. M. BINGHAM . . . Commercial Secretary
N. W. FORD . . . Traffic Manager
P. W. ADAMS . . . W. A. JOHNSON
A. E. WHITEHILL

DEPARTMENTAL STAFF

M. R. RAITES	A. M. KRISTOF
R. C. JOHNSON	M. T. MONTGOMERY
K. M. EDGERTON	D. N. LOUCKS
A. M. MURPHY	J. A. KAST
A. D. MIGLIORA	M. E. HOGLUND
F. J. BROWN	M. S. KINNE

Speak Up; Act Now for Democracy

By E. KENT HUBBARD

Within sixty days, it is freely predicted that Nazi Germany will make an "all out" attempt to bring Great Britain to her knees. No one knows what horrible surprises of warfare may be in store for the brave defenders of the British Isles, but if Britain's "armies fight as the people think" with our best war material support, they will defeat the invader. English men, women and children are thinking and acting only in terms of ultimate victory for their "way of life". Although the English laid hold of this necessary type of preparedness since Dunkirk, they might have avoided their present serious plight had they developed this kind of thought five years ago.

What is the situation in America? We, too, are speeding up the production of armaments and the training of armed forces—running a preparedness race before a zero hour which is certain for Britain and possible for us. Despite the increasing tempo of our armament efforts, we are pitifully weak in the type of preparedness that will make every man and woman in America eager to live, and die, if need be, to protect our democratic way of life. We need to awaken quickly to the fact that America faces its greatest dangers at home from an alleged ten million Americans who, after years of depression, are not in sympathy with American Democracy, and millions more who have doubt about the values of Democracy because of propaganda from the dictator countries, dissatisfaction with their lot, apathy, or ignorance.

To counter these attempts now being directly or indirectly financed by enemy dictatorships to destroy our national unity from within calls for an effective campaign of truth telling—a campaign entered into with conviction and purpose by every organization and individual who believes in law, equality and

(Continued on page 11)

Published monthly by the Manufacturers' Association of Connecticut, Inc., with executive offices at 436 Capital Avenue, Hartford, Connecticut. Entered as second-class matter January 29, 1929, at the post office at Hartford, Connecticut, under the Act of March 3, 1879. As the official magazine of the Manufacturers' Association of Connecticut, Inc., it carries authoritative articles and notices concerning the Association activities. In all other respects the Association is not responsible for the contents and for the opinion of its writers. Subscription Rates: \$4.00 for 3 years; one year, \$1.50; 20¢ a copy. Subscribers should notify publisher promptly of changes in address. Advertising rates on application.

THE GRAY MANUFACTURING COMPANY

THE Gray Manufacturing Company which, until about a year ago, was known as the Gray Telephone Pay Station Company, is this year observing its 50th anniversary. Despite this half century of industrial activity, probably not more than a few Connecticut residents recall that Amos Whitney, co-founder of Pratt & Whitney Company, was President of the Gray Company from its inception in 1891 to 1920, or that Francis A. Pratt was one of the original signers of the Certificate of Incorporation in 1891.

From the date the company was launched to produce the first telephone pay station in this country, (which was installed in Hartford, corner of Main and Central Row, in the ground floor of the old Hartford bank, where the Hartford-Connecticut Trust now stands) until the date of Mr. Whitney's death in 1920, the company was extremely prosperous. Built on the sound foundations which Mr. Whitney had created, it showed total profits which, in terms of dividends, amounted to over \$7,000,000 paid out to stockholders. These astounding results had their roots in William Gray's unusual invention and an original investment of some \$40,000 by twenty-five courageous subscribers which included Mr. Gray, the inventor, Charles Soby, the Hartford tobacco merchant, Mr. Pratt and Mr. Whitney.

During these many fruitful years of productive effort, approximately 80% of Gray's entire output was "sold" to the Western Electric Company. The Gray company had no need of a sales organization for Western Electric was a subsidiary of the great American Telephone and Telegraph Company which, through its own efforts in building its business, in effect, acted as the principal sales outlet for the Gray company. The remaining 20% of Gray's output, which amounted then to accommodation telephone business, moved to the small independent telephone companies throughout the country.

This ideal sales arrangement with American Telephone and Telegraph Company continued until January,



AMOS WHITNEY

FIRST President of the Gray company from its inception in 1891 until his death in 1920.

1934, when Western Electric officially notified the Gray company that it was prepared to manufacture its own pay stations. Expressing regret at so great a loss to the Gray company, Western Electric is said to have reminded Gray that it had vainly sought from 1926 on to obtain reduced prices based on increased volume but were unable to secure them, and that it felt free to manufacture its own pay stations because, as it had pointed out many times before, it believed Gray no longer had any controlling patents in the pay station field.

Believing its patents to be invulnerable, the Gray Telephone Pay Station Company, headed by George A. Long, successor to Mr. Whitney, continued to refuse price reductions to Western Electric Company.

Then came the start of a long court fight launched by Gray against the Western Electric Company which was decided adversely for the Gray company in 1938. Almost immediately after the loss of this business, Gray company personnel was reduced from 400 to approximately 50 employees. From a volume of about \$2,000,000 annually, netting tremendous profits

(the Gray stock had risen from an original par of \$100 a share (later split 10 for 1) to over \$2,000 a share), based in the main on profits from Western Electric business, Gray business dropped to a figure approximating the annual \$50,000 salary of its president. Despite the reduction in personnel, the overhead continued greater than the total gross business from independent telephone companies, the only business Gray had left.

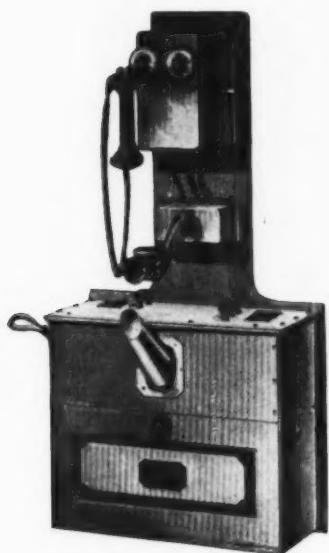
Stagnation became the order of the day while awaiting the final decision of the court in the patent action. Despite some new business, the total of all business done from 1934 to 1938 (the period of patent litigation) is said to have averaged less than the salaries of officers and office employees. Dissatisfaction spread among the stockholders who, in their 1934 meeting, named a group of public-spirited Hartford citizens as a "Reform Board" to attempt to re-establish friendly and contractual relations with Western Electric Company. Since Western Electric had already spent several hundred thousand dollars in preparation for manufacturing their own pay stations, this group, after exhaustive efforts, saw their work doomed to failure and resigned.

Business continued to languish until 1938 when the stockholders elected at their annual meeting in March, 1938, a new provisional board of directors who named temporary officers to deal with the serious situation. In July, 1938, Walter E. Ditmars, even then a large stockholder of Gray, was elected a director. Afterwards a number of other prominent men were named as directors, among whom were: Charles L. Campbell, President of the Connecticut Light & Power Company; Parry D. Saylor, Chairman of the Board of Directors of Canada Dry Ginger Ale Company; O. Glenn Saxon, then Finance Commissioner of Connecticut; Ralph E. Day, President of the Bridgeport Brass Company; and Burton Bartlett of Bartlett-Brainard, Hartford building contractors. The new directors, a majority of whom are Connecticut residents, were immediately faced with the necessity

of making a vital decision, liquidation or operation. They decided to continue the business.

About Face

Practically the first step taken was to amend its charter in order that the company might engage in a general manufacturing business, and thus have an opportunity to build anew in other fields outside of the telephone



ONE of the first telephone pay stations built by Gray—pioneers in this industry.

pay station business. This was quickly approved by the stockholders. The next step was a thorough search for new products to form the basis of a general manufacturing business. Out of the hundreds investigated, only two have been accepted. One of these was the Anemostat, an air diffusing device, now produced by the Gray company exclusively. The other was the Gray Audograph, a multi-purpose all-electric recording machine, which was originally introduced to the Gray company by C. B. Whittlesey, former Executive Vice President of the Hartford Chamber of Commerce, and one-time General Manager of the Hartford Rubber Works.

Once the Gray Company had acquired these two products, it was immediately faced with the problem of rehabilitating the plant, building, equipment and organization. The organization routine and plant equip-



ONE of Gray's 1941 pay stations

ment and arrangement had been set up for a one product, one customer business of the patented type with no cost accounting system and no set method of determining overhead. Capable of producing a large volume of its one product, the Gray company found itself with much too much of everything but business and profit when it lost the Western Electric Company account. Looking toward the day when Gray might regain its former position of importance in the industrial world, the officers and board of directors demanded change, and they have been getting it rapidly since

1938. How they have succeeded in rehabilitating the organization, plant and business may be judged by the facts set forth in the remainder of this article.

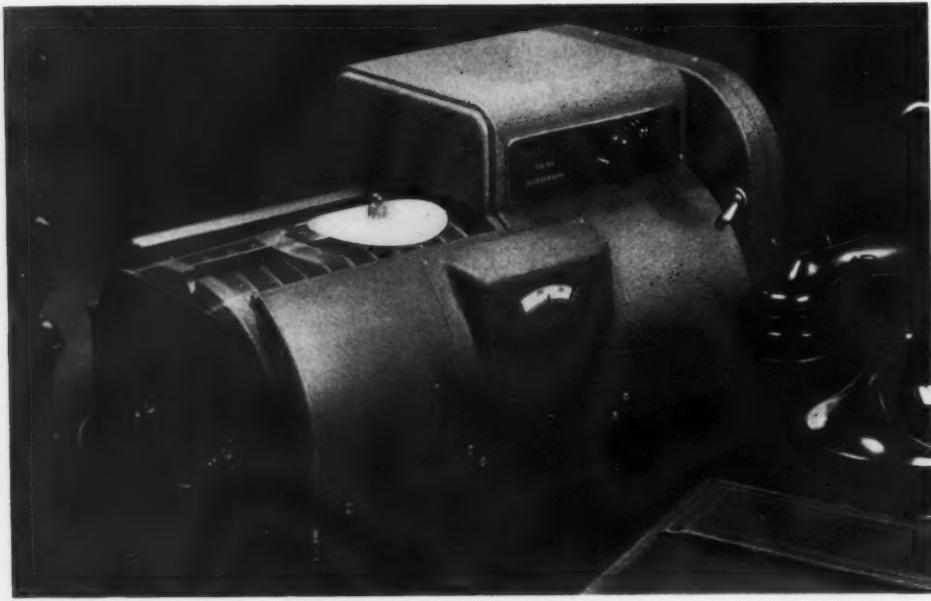
At the present time the department producing Anemostats, sold by a national sales organization, is working on a two-shift basis. The telephone business, after many years of stagnation, has increased to a point where it showed for the first month of 1941 a total volume equal to that done in the first six months of 1940. The Audograph, after nearly two years of intensive effort and practical development, is now rapidly approaching commercialization, with production tools substantially ready to make the product in volume. Methods of distribution are also said to be nearing completion.

The Anemostat

The Anemostat, consisting of a number of hollow flaring members or cones placed in a specified relationship to each other, is said to be considered by many authorities as the most efficient means for diffusing and equalizing room air and temperature. Unknown but a few short years ago, it has been adopted as standard in many marine and air installations, streamlined trains, cars and buses. Among the increasing volume of installations are included government buildings (Army—Navy—Air Corps) ships, airplanes and barracks, includ-

THE ANEMOSTAT—diffusing device being manufactured by Gray's Spinning Department.





THE GRAY AUDOGRAPH. An all electric recording multi-purpose recording machine soon to be put into production in the Gray plant.

ing the United States Military Academy. Among the ships on which Anemostats are installed are the modern liner, the Queen Mary, and many other large vessels. Simply designed and constructed of aluminum and steel, they are frequently finished to blend perfectly into modern decorative schemes while at the same time fitting into any given architectural plan.

Because of the oft-repeated claims of engineers that "No air conditioning system is better than its air distribution", the Anemostat is being utilized to an ever increasing extent by architects and consulting engineers.

Telephone Business

As a result of negotiations lasting more than a year, the distribution set-up was completed last October to provide for the distribution of modernized telephone pay stations through six major distributors including the Automatic Electric Company and Graybar Electric to provide for worldwide coverage. Although considerable progress has been made in the expansion of this business mostly through the establishment of a sound distribution system and improvement in products, the company is continuing its development which envisions much greater improvement in the product and comparable increases in business volume.

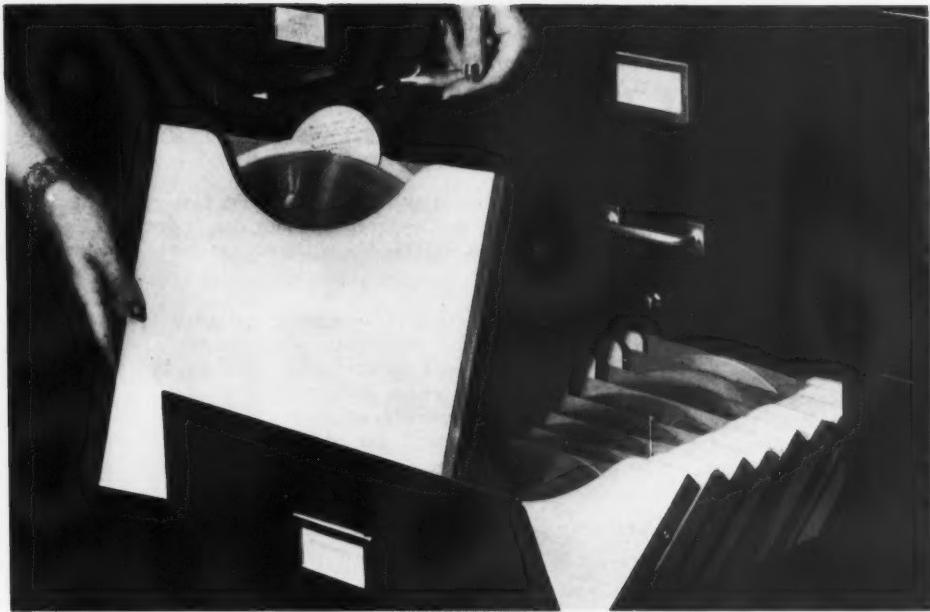
The Gray Audograph

To give full details in connection with the engineering development of the Audograph would require far more space than is available in this article, or even in this entire issue. In brief, this machine records electrically on an entirely new but tested principle. Some idea of what the development entails may be gained from the fact that the Audograph is constructed of more than 1000 parts with many requiring precision work in their production, compared with the telephone pay station which has less than 400 parts and the new Army Garand rifle with less than 100. Thousands of drawings, revisions, testing of parts and materials were only a part of the development program.

The outlook for Gray Audograph sales appears to experienced sources as excellent. Its patented structure and commercial possibilities furnish one of the reasons for the re-establishment of friendly and contractual relations with the Bell Telephone System, which president Walter E. Dittmars accomplished after protracted negotiations covering more than a year of constant contact. Other signs for the success of the Audograph include the fact that it received the Design of the Month Award in Electrical Manufacturing Magazine for September, 1940, and that Mr. Orville M.

Dunning, formerly for many years in charge of research and development for the Telediphone Division of Thomas A. Edison, Inc., has recently joined the Gray organization as chief engineer in charge of development and research. Work on patent structure and development occupies an important part in Gray's plans, for the management fully appreciates that past profits were largely the result of protection and perfection in those activities.

In addition to its application for ordinary office dictation and transcription, the Audograph is said to have scores of other uses including practical adaptability for military purposes, court proceedings, parole board proceedings, conference recordings, lecture recordings, education and entertainment. Recording is done on a flexible acetate, non-breakable, transparent record of .005 inch thickness which may be filed in ordinary filing cabinets for play-back over an indefinite period. These records will record 18 minutes of dictation, speeches or other proceedings. After several months of field tests, now said to be complete, commercial production is said to be near at hand. Concurrently with these problems, the organization had to be rebuilt. Old personnel was introduced to the new. Perhaps one of the most difficult stages of the work was that of proving to company per-



FLEXIBLE records can be filed in standard filing cabinets and are great conservers of space.

sonnel, both young and old—employees with families and responsibilities, that the Gray Company could reverse the downward trend. A fair gauge of attainment in this direction is the fact that the present personnel approximates 250, or five times the number employed in 1938.

Personnel

No matter how excellent the products of the plant in which they are produced, the quality of personnel usually spells success or failure for any company. Especially is this true in the management category. Let us take a quick look at the management personalities at Gray.

President W. E. Ditmars was elected to that office in November, 1938. He attended the United Naval Academy at Annapolis, M.I.T. and Columbia University. He was an officer in the United States Army, his last assignment being in the Industrial War Plans section of the Army Ordnance Department. Upon leaving the service he became director of sales of a nationwide business organization. Later he became President of The Solid Carbonic Company which, with the duPont Company, built and profitably operated the first dry ice plant in the world. Mr. Ditmars has been actively associated with other manufacturing and sales activities. He and his fam-

ily are by far the largest stockholders of Gray which today is more nearly owner-managed than at any time in its existence.

Mr. B. W. Ainsworth, of Fairfield, Connecticut, is Vice President and a director of the company and makes his headquarters in Hartford at the plant. He is an engineer and manufacturer of wide experience, being formerly vice president of The Rolls Royce Corporation and a member of the British War Mission during the last war. Plant Manager is Michael H. Flynn, a man of extensive manufacturing experience, who for many years was with the Royal Typewriter Company. T. F. Cassidy, Jr., who has been with the company for many years, was recently appointed Telephone Sales Manager. Plant Superintendent is B. A. Ehlberg, also a graduate of M.I.T. and possessing a long background of plant experience.

During 1940 the Gray employees formed their own social organization known as the Gray Recreation Association which elected Mr. Cassidy its first president. The organization includes as members all full-time employees from porter to president. During 1940, the company introduced a participating system of insurance benefits including health, accident and hospitalization and life insurance to which nearly 90% of all employees

belong as of this time.

As President Ditmars sums up the situation, "The advertisement of the Gray company which will appear in the February issue of CONNECTICUT INDUSTRY is regarded by the Gray management not only as an advertisement and an announcement to defense contractors about available Gray facilities, but also as the first public expression of the management that it has substantially completed its two-year program of rehabilitation and is now ready to realize upon the work it has been carrying on during that period. We are now naturally anxious to proceed with our own production and sales. However, we are cognizant of the necessity and immensity of the defense program and fully in sympathy with Governor Hurley's statement that 'small enterprise can and should have a greater share in defense production,' and with Mr. Knudsen's call for Industrial Volunteers. With this in mind at all times, the Gray plant and facilities are being progressively coordinated for both private and defense production. This combined result would not have been possible without the tireless effort of the Gray employees, all of them, including, of course, the efforts of our directors and the splendid cooperation which I have received from so many other members of the community."

INDUSTRY MEETS THE CHALLENGE OF DEFENSE

VENTURE to quote a portion of a recent message if our President to Congress: "We hope that the world situation may soon improve. But we are bound to be prepared for a long period of possible danger. Who can say, with assurance, that we shall not need for our defense every possible resource that exists or may be developed in our country?"

I am deeply honored by having assigned to me by our President a responsible part in this work of preparation and development.

Despotic power we abhor but we must recognize that it compels the exercise of certain qualities which we must voluntarily exercise if we are to prevail in times of conflict. Among these qualities is concentration on definite objectives with singleness of purpose. We are a peaceful people. The ways of war are foreign to us. Our industries are now being organized for national defense which, to be effective, must be capable of the maximum of resistance to attack.

The modern machinery of that criminal violence, war, now threatening the very dignity of mankind, is enormous, complicated and swift in its scientific development. We are engaged in building a defense which our President has proclaimed shall be able to prevail against any possible combination and we will do it.

But as a producer, I say that our speedy procurement of the necessary defense implements which our President and Congress have promised the people demands intense concentration on production as an objective in itself.

I think with this before us we might begin to realize that conditions abroad, which change almost from day to day, have tremendous influence on our future course in arming for defense. You have read about the billions of dollars of orders which have been placed with thousands of contractors and subcontractors all over the country and perhaps it might be well if I gave you a quick description of what all this money means in units. In round figures:

50,000 Airplanes
130,000 Engines
17,000 Heavy Guns

An Address Given at the Annual Dinner, National Association of Manufacturers and 45th Congress of American Industry December 13, 1940.
By WILLIAM KNUDSEN, National Defense Advisory Commission.

Editor's Note. Mr. Knudsen presents some of the problems of building for national defense and suggests ways and means industry and labor may cooperate to meet the "horrible urgency" for speed to meet the challenge.

estimated to require about 18 billion man hours, conservatively. When we consider this addition to the regular production in the United States and realize that the larger percentage of this load lies in the heavy goods industries we are confronted, due to the time element involved, with the greatest production problem of any country in modern times.

The three factors involved in this problem are the Government as the customer, and Industry and Labor as the sellers. Behind the Government is the all powerful force of the country's will and the all important public opinion which must guide our actions in order to accomplish a successful result. In my earlier talks on the problems of defense I stated that initially the defense load would be superimposed on the regular business of the country until it became necessary to adjust. The simple reason for this was that the contracting and tooling-up period would not absorb employment which might be made idle by trying to restrict regular business during this tooling up period. You are all perhaps familiar with the initial obstacles which had to be cleared away such as appropriations, rapid depreciation allowances and the plant facilities contract. All these have been cleared away and contracts have become a much simpler matter as far as procurement is concerned. I think we are successfully meeting the demand for spreading the Government plants to localities where surplus labor and skill is available. We haven't by any means satisfied everybody but an honest attempt has been made to meet this part of the problem the best way. The orders are more than 85 per cent placed and we have arrived at the second stage of the problem.

WILLIAM KNUDSEN



25,000 Light Guns
13,000 Trench Mortars
33 Million Shells loaded
9,200 Tanks
300,000 Machine Guns and Ammunition
400,000 Automatic Rifles and Ammunition
1,300,000 Regular Rifles and Ammunition
380 Navy Ships
200 Mercantile Ships
210 Camps and Cantonments
40 Government Factories
Clothing and other equipment for
1,200,000 Men

I have included with these quantities such British and other foreign material placed at the present time. The program, with all its subcontract and equipment features is large and is

What can I then consistently ask for now? The defense job to my mind has not been sufficiently sold to Industry and Labor as yet. The public generally is sold on defense—letters that I get and word of mouth infor-

mation that I get clearly indicate that the man in the street is for defense 100 per cent and wants to see a lot of material turned out before he feels secure. But have the two most important elements, Industry and Labor, been fully sold on the serious side of the job? Conditions abroad change rapidly from day to day. The European war is gradually taking in more and more territory and most of us hope that we will have the time necessary to get prepared for defense and thus avert attack. Well, that might be all right and I am not of the worrying kind but after all, a war depends just as much on what the other fellow thinks, as on what we think ourselves. So I think that the best and the only thing the United States can do and must do under the circumstances is to prepare swiftly and well to protect ourselves—for by doing that I feel that we have the only insurance policy against attack. It is our responsibility to see that this is done in record time and that we proceed right here and now to show the world that we can do the things we have been so wishfully forecasting the last six months. I myself have done my share of wishing and I am still betting that the tooling up can be done quickly but I have to call your attention to some of the things I see which I think could help put still more steam into the picture.

Friday night has become the big night in most of our industrial picture. It used to be Saturday night—we have cut 20 per cent off our machine time. Can we afford to do this? Can't we stop this blackout, this lack of production, from Friday to Monday and get more use out of the equipment? We can train the men to operate it. Isn't it possible to put the defense job on a war basis even if we are at peace? When I think of the seriousness of the whole world situation where the Americas are the only spot where freedom and law still have a foothold, I wonder if we are not justified in doing just that. Have we done everything we can to utilize existing facilities and offer them to companies having defense contracts? Can we subcontract more of our work and spread it so as to make speed and more speed that way? Every manufacturing concern which has a defense contract should be informed of idle facilities in the locality so as to confine the new equipment as far as possible to special machinery.

Our machine tool industry is working hard and well on their job. A recent survey shows that of 115 companies, 86 reported subcontracting as follows: 23 reported complete machines; 33 reported sub-assemblies; 80 reported parts subcontracted; 65 reported expansion averaging 30% of plant area and employment has been practically doubled in a year. Production of machine tools is estimated at a 50% increase in 1941 over 1940 and total value, \$600,000,000. Another valuable point in connection with the machine tool industry is that you get your orders placed promptly so as to insure proper planning. An example of this was a recent instance where thirty machines had been omitted from the original order through an oversight and had to be arranged for. The machine tool industry has set a very good example of speeding up before us and it is about the way other items of defense will have to proceed if we are going to make time.

The aircraft industry is still in the expanding stage, in fact it will be in the expansion stage until Spring. Still, while the production is far from satisfactory we ought to gain from now on. Most of the heavy combat planes are new models not heretofore in production and this has slowed the job up. The engine companies need equipment, in fact 29% of all unfilled machine tool orders are for the aviation industry; 37% is for the Army and Navy, and other defense jobs; 28% is for foreign customers and the balance covers miscellaneous. There is one question in aircraft which I think should be realized and that is that one plane is recorded as one plane, whether it weighs 4,000 pounds or 40,000 pounds and whether it has a 350 horsepower training engine or four 1250 horsepower fighting engines. There is no use worrying about the light planes—we can get them. On fighting planes we are in pretty fair shape but bombing planes, from 16,000 pounds up to the heaviest take time and they must be worked out for real production before we can get quantities. A lot of work is being done trying to subcontract parts of the planes to body manufacturing companies and others, but this in some cases involves design in order to get the best production results and must be worked out with the plane assembler and the designer. Frankly, we are not doing anything compared to the forecast by the manufacturers and the Commission in July, and our

hoped for production figures for January 1, 1941, of 1,000 planes per month, have to be scaled down by 30% to be correct.

Guns and machine guns are still in the tooling stage except for such capacity as was ready before we started. However, jobs that are wholly on machines will pick up fast when the tools are ready because the assembling is the smaller part of the hours per job. The same reasoning applies to powder and its ingredients, where the equipment installation rapidly responds to quantity production when finished.

Light tanks are being produced now at the rate of four per day and the larger so-called medium tanks will be available from three different plants by midsummer.

One thing however is sure. After we have all these orders in the field we shall need a lot of help from experienced industrialists who perhaps are not involved directly on defense orders and who can spare us some of their time and experience to help solve problems which may arise on material, machines, specifications and design. It has been very gratifying to me to see how, during the last month, in factories having defense jobs, a great deal of study is being given to shorten operations over that planned in the original estimates. The good old American ingenuity is coming into its own and will help the elapsed time on the job and also the quality.

I don't know whether we have done a job yet in helping labor to get the proper understanding of what this defense job means to their future and their country's future. When I look over the trend in the occupied countries in Europe, America is about the only spot left where law prevails and where the man at the bench has a chance to make his way without clicking his heels.

We all seem to be worrying about how we are going to divide the profits without giving consideration to the fact that we ourselves have to furnish the price to buy the materials with. We hear so much about all the things that ought to be fixed right now. We read resolutions from every direction. It is my sincere hope that we will, as far as humanly possible, try to wipe out whatever differences there may be that do not depart from principles guaranteed us by the law of the land. The only way to get this program going is to get a concerted

effort and a cooperative effort—an incentive fired with the spirit of sacrifice from everybody from the bench to the manager's desk. If we can accomplish this, our program is finished.

Congress has expressed the public will in laws such as the Sherman Act, the Clayton Act, the Walsh-Healey Act, and the National Labor Relations Act and the Fair Labor Standards Act. It has specifically directed, by the Walsh-Healey Act that certain representations and stipulations shall form a part of the requirements and conditions in Government contracts involving over \$10,000 and has prescribed the penalty for violations. Congress has conferred upon permanent competent departments: the Department of Justice, the Federal Trade Commission, and the Labor Department, each equipped for the purpose, the power and responsibility in various forms, to enforce the other Acts, to determine the fact of violation, to cause the violator to be punished and the wronged to be indemnified. Furthermore, Congress has not directed that all or any part of these other Acts be written into Government contracts and the considered decision not to do so is as affirmative an indication of Congressional intent as is the direction for inclusion of the Walsh-Healey Act.

I am wholly in sympathy with the rights of Labor under the law. I am happy to see the published expressions by Labor of their willingness to mediate any difficulty before resorting to strikes, but I have also faith in Labor's acceptance of the spirit of fair play and the necessity for avoiding discrimination against industry equally as unfair as discrimination against labor. I cannot regard our people as divided in essential interests so that we should consider Labor and Industry, or any other groups, as other than parts of a compact national body. I cannot believe that either needs to be coerced or purchased, in the invidious sense. I believe all will do as I intend to do: obey the orders of the Chief Executive and the laws enacted by Congress, as construed by the Courts, and help to prove that a free people are capable of self-discipline and of productive work superior to that of a dictator's subjects.

Down in Washington we are asked if we can do a lot of things. Some of them we can do and some we can't but I can assure you this, that the group I work with on the Defense Commission will do everything that

is humanly possible to smooth out whatever little difficulties you might have in the execution of your defense orders. We represent you. We are down there—you have the work in your plants. We hear a lot about what is called "red tape" which is another name for cumbersome procedure, but in justice to the top officials of the Army and Navy, we can generally get action when requested. We are there to give you assistance in every way we can and all we ask is, give us speed and more speed. Full time operations of all machines. Talk to your men—make them feel that it is their responsibility as well as yours. Ask them what they think of a civilization that drives women and children to live in cold and wet holes in the ground. We have gone back a thousand years in the last year. Why? Because a few individuals decide the actions of Totalitarian nations and Democracy is fighting for its life. It makes one shudder to think that brains can devise a situation like this—where we kill the harmless because we want to break the spirit of the people. Let us work and work harder so that the possibility of such barbarism spreading to our shores will be an impossibility forever.

Let's get on this job spiritually. What is more important today? We are, to my mind, 'way beyond worrying about the cost; the laws we think we ought to have and the way we are going to live when this is all over. The important thing now is to get this job done or as much more of the job done as is required to permanently protect our standard of living and our institutions, our freedom and individual opportunities.

Let each manufacturer utilize his gift for organization to help the total picture. Let us not lay-in inventories which we don't need. Let us order our equipment to come in to balance the operation. Get enough for one line and get it in operation without having an out-of-balance condition in the whole set-up. Sure, we have priorities but the best way to have priorities is not to have to use them. I am reminded of my first experience with priorities in Buffalo 35 years ago. I was the Assistant Superintendent in a plant which manufactured a lot of different articles in rather small lots. The boss got the idea that the order clerk in the office should have a special ticket marked "Rush" made out of red pasteboard to drop in the boxes of material the customers had written or

wired for. I protested mildly that the foreman's work order was the best way to handle it, but the boss had his way and three weeks later I was able to take him through the shop and show him that practically every box had a red ticket in it marked "Rush." So we collected all the red tickets and went back to the old system of making the foreman responsible. I mention this merely to emphasize the necessity for leaving responsibility with the proper authority. Most anybody can devise a system, but if there is no actual experience behind it, it is liable to be a hindrance rather than a help. We get lots of suggestions as to how to speed production and we examine them carefully in the light of our experience for what they are worth. We know we are subject to criticism, constructive and otherwise, but whichever steps we take will be along the old line policy of responsibility where it belongs.

I should like to ask your cooperation in another matter and that is prices. With bigger and better business prices generally get jittery and for some reason or another are subject to a lot of pressure, mostly due to conversation and seldom to fact. A price inflation through imaginary shortages or attempt to corner a supply brings with it all the evils of a total spiral. The Commission is studying this question from every angle. They are in possession of extensive data covering raw materials, both domestic and foreign, and will be happy to give you any information regarding availability of any material where shortages may be predicted without grounds.

There is one more point I should like to bring before you, specifically as you represent the biggest industrial organization in America. Mr. Prentis has given us the most hearty and comforting assurances of the support of your great organization and we are truly grateful, but I am going to ask you—all you gentlemen who are located in all the manufacturing centers of the United States, to support a most earnest request from the Defense Commission. I have not tried to paint the lily in this talk. I have tried to make it clear to you that I consider the defense effort to date not satisfactory enough to warrant hopes that everything is all well. Maybe I haven't made it strong enough. However, I feel that when you made your delivery schedules there was probably some cushion in them for contin-

(Continued on page 26)

THE WORLD AHEAD

M R. CHAIRMAN, Ladies and Gentlemen: It is a very distinct honor to be asked to speak to this group of industrial leaders. I do not know whether my friends who asked me to do this knew in what a position I would be placed in trying to close a series of meetings such as you have had here. I am not a Pollyanna optimist, but nevertheless, I am an optimist by fact, and so, when we have looked at all the dire things that may or may not happen to us in the future, one has to be sure that he hasn't got on rose-colored glasses, and I am equally sure that he musn't have on dark glasses.

If I had known exactly the atmosphere in which I would be asked to speak, I would have read a paragraph from a book which gives the life of Michael Faraday, one of our great and beginning scientists in the electrical industry, because in that little book, it said something like this: With France in control of all of Europe and England without a friend, with the heads of all the scientists of Europe being cut off and the scientists of England banished, what hope can there be?

That was only about a hundred and twenty-five years ago, and yet, that dire picture disappeared and somehow got absorbed in the mesh of human activity. And so, in the short time, relatively, of a hundred and twenty-five years, we have forgotten that era and we have gone through one almost as bad, twenty or twenty-five years ago, and we are in another.

Somebody said here on the platform this afternoon that people were inclined to go to war. They have been going to war. I think that history will show you that in the last three thousand years, we have had three hundred years of peace. That is 10 per cent. Now, it seems to me that if we analyze what are the essentials of the 10 per cent, we might be able to improve it in the next three thousand years to 20 per cent. And remember, the human family is not a one-generation thing at all, and human progress is not a one-generation thing; and so, if we can contribute anything to the system, I think it is up to us to do it.

Now, this being a meeting of the National Association of Manufacturers, I thought it might be interest-

An Address Given at 45th Congress of American Industry, Waldorf-Astoria Hotel, December 13, 1940.

By CHARLES KETTERING, Vice-President in Charge of Research, General Motors Corporation.

Editor's Note. Mr. Kettering, again in this address, as in many previous talks, struck telling blows at the attitude of "defeatism" while painting an optimistic picture of the world we can build tomorrow.



CHARLES KETTERING

ing for you to know what a research engineer thinks a manufacturer is, in permissible language for radio. Somebody said that the only difference between pure science and applied science is twenty years.

To me, a manufacturing organization is one which takes four very important factors and puts them together. They take materials, labor, capital and management, and that article which they make and ship out of their factories is a package that carries the services of all four of those people distant from them.

A great many manufacturers object to calling their product a crate but after all, that crate, that article, sold across the counter wherever it

goes, is one which carries all of those things in a proportional ratio to make that article worth more to the man who buys it than what he pays for it.

The other day, some friends of mine were sitting in a room and, a common thing these days, were listening to overseas broadcasts. We were in a rather peculiar environment and we were getting very good reception. Somebody said, "Isn't that a wonderful thing, that we can sit here and listen to these overseas broadcasts? And isn't the radio a wonderful thing?"

Well, the set wasn't a very expensive one, and I said, "Let's take it apart for fun and see what it is. Let's get a screw driver down here and take the case off." We took off the case, and then I said, "Let's call in some good cabinet or furniture maker. Do they think that case is wonderful?" "Why, no," they would say, "we make that; we can make a million of those if you want them. Give us a sample or give us your drawing, your specifications, and we can make it. There's nothing to it. There's nothing very wonderful about that. That's a simple, ordinary cabinet."

All right, let's go a little deeper. Let's pull out the vacuum tubes. To the man in the street, that is a very wonderful thing because the man knows nothing about it, but to the man who manufactures it, that is nothing but a bottle with some wires in it or a can with some pieces in it. "Can you make those?" "Sure, there's nothing to that. We can make millions of those. How many do you want?"

Well, there is the product. Don't you think that is a wonderful thing, that you can do that? Why, no sir, that's a common, everyday thing. We can do that all the time. We've got the factories set up to do that. We take the thing apart, we take it to pieces, and we call in the metal man. He says, "Why, that's nothing, just a few punch presses and some dies. We can stamp that out by the million."

So I said, "Now, what was wonderful about that radio after you got all these technicians in here and had them take a look at it? It wasn't the material at all. The thing that is wonderful is that when you take that amount of material and put it together, you can send out the services of every great electrical man that has lived since the time of Michael Faraday, and you could not send that out if you did not have the joint accumulation of their experiences."

So that package there, which is so many pounds, you may sell it by the pound but the fellow who buys it buys something that a scale is insensitive to, but has a value far beyond dollars or anything else that he can enumerate. In other words, there is something there in this package which you send out of your factories that is intangible, that you cannot measure by the dollar, by the foot, you cannot weigh it by the pound or measure it in any other way. Therefore, the manufacturer who does the best job is the manufacturer who endows the material which he sends up and which he sends out across the markets of the country with most of that intangible thing.

Each one of these things has a different factor but nevertheless, all of that is there and all of it is important. I do not think that the manufacturing organization in general has set up before the people what all of the essentials are.

I have a friend who has a lot to do with a great symphony orchestra, and he asked me to drop into the hall where they were practicing one day just as they were having a little recess. The boys were all off the stage, but their instruments were still there, and I said, "Is that the orchestra up there?" He said, "Oh, my, no, no! Those are just the instruments."

Well, pretty soon the musicians came back. Each one took his particular place and then the conductor came in, and as he led the orchestra, my friend said, "Yes, that is the orchestra." But then the conductor said, "Where is the music?" because an orchestra was absolutely no orchestra at all until it had something to play.

Therefore, in the thing we call management, we have the material, we have the apparatus, we have the trained technicians, but management must furnish a lot of things that are just as intangible as that scientific in-

tangibility that goes along with the radio set, because in that management that operated this orchestra, they had to select the type of program, they had to see that the music was available, they had to do all of that, and the conductor had to time and correlate all of the different parts of the orchestra so that it made a wonderful symphonic whole.

Most people do not think of manufacturing as being a beautifully timed, organized thing like that, but if you happen to get caught with a lot of inventory on hand, the manufacturer will know what discord in timing means. He will find that if he comes out with a product which is not the same or in the same tempo of his competitors, there is something in that, too. And so, after all, there is in the great correlation of industry, just as high a degree of artistry in the operation of a plant as there is in the conducting of an orchestra.

The most important thing, however, for all of this orchestra is the music, and the composer who writes the music is the reason why you have the orchestra, and, of course, I think the reason why we have factories and the reason why we have machinery is because we make a product, and I am the representative of the product.

Now, we have a very peculiar thing in this country, unknown in any other country, I believe, and that is we are troubled with excesses. We have excesses of men, material, and money, and I should judge from what I have heard today, there might be an indication of excess of debt.

The only reason you have all three of those excesses, and probably the fourth, is because we haven't got enough projects, and projects are just the beginning of another type of product. You have to start to grow a product like you do anything else, and I do not think that industry goes back to the composing far enough to recognize that it doesn't yet know how to properly raise industrial children, and I think that if we try to raise human children the same way we do industrial children, a baby nine months old would have to be earning its living.

When these new things start, they don't start with any great blare of trumpets, or anything of the kind. This is the 13th of December. On the 17th of December, 37 years ago, two boys from Dayton, Ohio, made the first nonstop flight ever made in an

airplane that flew 120 feet in twelve seconds, and that was a tremendous thing, that was an epoch day in history as we know now. To show you how much of an important thing it was then, those boys sent a telegram to their sister in Dayton, Ohio, Catherine Wright, and they said, "We have today made the first successful flight with an heavier-than-air machine driven by power. We are very much delighted and we will be home for Christmas."

Now, she got that, and of course she thought that was an important event, so she called one of the local newspaper offices; she rang quite a little bit before the answer came, and the fellow said, "Well!"—it interrupted a pinochle game, I presume, and so she read the telegram. The fellow said, "Wonderful! We are glad to know the boys are going to get home for Christmas."

Now, that is important for the simple reason that these new things do not come full-fledged; they grow like any other thing in the world, and the first product that you get from any type of research and engineering development is the work of amateurs, because all an amateur is, is a fellow who does a thing for the first time.

Now, all research people are, are professional amateurs. We are professional to the extent that we know we are going to have an awful lot of trouble, that everybody is going to think we are cuckoo, but we are amateurs because we know we are doing it the first time, and the chances are the way we have done it is about the worst way that it could be done, and so industrialists come to us and very sanctimoniously and reverently say, "You boys certainly do a bum job," and that is the reason why we are afraid to try new things, because we have to try them over, change the product, and so on and so on. You have heard it; most of you have made it, I am sure. I can give you a record with all of the essentials that go along with that, see! "Now, are you boys sure that this product is going to be all right? I am sure that it is not going to be all right," and I guarantee you all kinds of trouble if you take on a new thing, because that is in the history, and so with that thing, we start. Nobody can predict what the outcome of business is going to be. With all of the meetings of engineers, and so forth, it has never

been what anybody thought it was, and so today with the enormous industry which it has grown to be, twenty-five years ago if you had said to anybody that you were going to have highways such as we have, all of this type of thing, everybody would have said, "Oh, that's foolish, it can't be." Remember in that time, the only paved streets there were, were in the towns and villages. Now that is the only place where there aren't any.

And so as you go along with this thing and you see these various stages which industry has gone through, I think we are to do as the rest have done, look into history. I have been looking for somebody that will invent a word for me, and the word that I want them to invent means exactly the opposite to what history means. History is looking back; it is the most fixed and unalterable thing in the world. I want some educated person to invent a word which means looking to the future that history does to the past.

We spend a lot of time studying history. You can't order it; you can find out what they did, but somebody said the only thing history teaches you or the only thing you can learn from history is that you can't learn anything from it.

Now, we have so studied history and we have put it in the curricula of our schools so long that everybody is looking back at history. If you drove an automobile looking back where you came from, I don't need to tell you what kind of accidents you would have, and I think they would be the reason we have only had ten per cent of peace in three thousand years, that we are trying to drive the whole procession of civilization by looking back, and the reason we get so many surprises is because we back into them instead of looking forward where we are going.

So the thing I want to bring to you today is to see whether we can't do a part-time job in looking forward. The speaker who just preceded me complimented our particular profession, said what would need to be done in the research laboratories, and things like that, so I needn't repeat it to you, because I so thoroughly believe in it, but most people say, "We don't see very much what can be done." So I said, all right, let's go back now and let's see if we can find out something from this history business that we have been working at so long. Let's

suppose we had along the stage here a file in which we had a letter that was written as to the state of the nation and the world each year from the time we have been able to make signs. There would be four thousand of them, perhaps. Now, let's reach over and pull one of them out, I don't care what one you pull out because it is the same letter. Here is what it says, "We do not see how the people who lived before us got along with the meager facilities which they had, but we don't see much chance for improvement over what we have."

We don't seem to have the ability to see that the process of time has not changed. It will soon be the first of the year now, and we will be getting these new calendars, or you will be giving them, depending on whether you are a buyer or a seller, and as you begin to tear off those leaves of that calendar, whether it is a daily or a monthly one, I would like for you just to keep this thing in mind, that between every one of the leaves of those calendars there is some new process or some new change that needs to engross your attention to a certain extent. There is some new thing in that calendar; you can't avoid it. Therefore, we might as well make up our minds that we are going to study what the future holds for us in an intelligent way, because you can do something with the future. We are in a great building here, this Waldorf-Astoria Hotel. At one time that was a thought in somebody's mind, a very intangible, a very impractical thing, which was not like the building that was finally started, but finally time went on and it became a physical thing. The great steamship that plies the ocean, when, as, and if it can, was exactly the same sort of thing; so with the railway train, the motor car, the airplane; they were all thoughts, intangible and immaterial as the most mystic thing in the world

that you can think of, and today they become material realities, which for some reason get into our mind the point of view that we can't do anything with, but we can because we don't know much about anything. Look how we have improved in the last few years! We talk about the plastic age. That is only twenty-five years ago since Dr. Bakeman put out the first one. I don't know what it is going to be. You are going to have a demonstration of these new things here in a little while. All you need to do is to imagine what you would like

to have. If you wish for a thing long enough—some great writer put it this way: He said, "Don't keep on wishing for a thing too much unless you expect to get it, because you will." And so we have lost our wishing ability in this country. We are looking backwards too much. We think the world is finished, and it hasn't even started. This war will disappear, other wars will have disappeared, and out of the thing has been a continual upbuilding of the things that the world will provide for them. I can't be a pessimist, and if I can get the Association of Manufacturers to have a youthful view, that looks toward the rising sun of tomorrow, with the same kind of intelligence and activity that they put into their regular business, instead of looking at the setting sun, of what is past, there is nothing in the world, regardless of ideologies or anything else that you can think, that will keep the future from being the thing you want it to be.

SPEAK UP; ACT NOW FOR DEMOCRACY

(Continued from page 1)

justice. Effective truth-telling about our Democracy must at once admit our errors, point out our strengths and compare the privileges offered by our way of life to those conferred by totalitarian governments. We must be able to give strong answers and repeat them again and again in response to the many accusations made against Democracy.

Although all good Americans can enumerate many reasons for their belief in Democracy, yet all of us could become more forceful missionaries to the disbelievers and the apathetic if we but took the time to read the book, "Speak Up for Democracy", published by The Viking Press last November. Authored by Edward L. Bernays, whom Time Magazine labels "U. S. Publicist No. 1", the book gives a crystal clear blueprint of when, where and how to speak up for Democracy.

We stand at the turning point of history. Responsibility for the shape of things to come rests with every true American. To the man or woman who is puzzled about "What to do to help", I say read up, speak up and act for Democracy—and do it now.

INDUSTRIAL HEALTH CONGRESS

"**F**ROM the standpoint of industrial health we are virtually at war", was the keynote of the Third Annual Congress on Industrial Health, held in Chicago on January 13-15, 1941, whose attendance of 300, the largest in the history of the Congress, attested the great interest in the subject. To safeguard the health of the millions of workers in American industry today about three times the available supply of industrial doctors, nurses, hygienists and engineers is needed.

Reliance in the emergency must rest not on industrial medical specialists, of whom there is a lack, but on the private physician, who should utilize every opportunity for training himself in industrial requirements. Universities and medical societies must offer special courses for this purpose. The teaching program should preferably provide practical instruction on the premises of plants through a sort of plant internship for both the new medical graduate and the experienced physician. Special attention should be devoted to the type of hazards met in war industries.

As a general principle, one speaker emphasized, it is not necessary to stop the use of a poisonous material, but rather to control its use. As the toxicity of a substance becomes better understood, widespread utilization under suitable conditions becomes possible with relative safety. Newer photoelectric tests which detect infinitesimal amounts in human urine and, particularly, blood offer better prospect for adequate control than tests determining amounts in the environment.

Other methods of detecting and evaluating hazardous exposures were discussed in a symposium, such, for example, as the use of forms for completely recording materials and processes employed in each department of the factory to serve as a guide for recognizing early symptoms presented by the workers in the department. Pitfalls to be avoided when occupational diseases simulate non-occupational, were also the subject of a paper. Many of the points thus brought out were demonstrated during a visit to the Carnegie-Illinois Steel Corporation at Gary, Ind.

By CLIFFORD KUH, M.D., New Haven.

Chairman, Committee on Industrial Health, Connecticut State Medical Society.

Editor's Note. In this report Doctor Kuh sets forth the chief views and developments of the nation's industrial health leaders as set forth in the Third Congress held in Chicago, January 13 to 15. They should be of great value to industrial management if applied to health problems in their respective plants.

The practical aspect of the Congress was further demonstrated by consideration of the most common medical problems to be met in industry during the preparedness program. These centered around protection of the skin, the organ most commonly affected by occupational disease; treatment of injuries of the hand, the part of the body most frequently injured in industry; protecting the eyes, whose disability is most seriously handicapping; and the prevention of colds, whose prevalence is responsible for most time loss in industry.

As to the latter no specific measures appear possible at present. Air condition of buildings has been found to have no effect on the incidence of colds. The removal of contributing physical defects, as infected tonsils, was advocated. General hygienic procedures, both personal and environmental, are valuable, namely, the avoidance of detrimental influences, such as overheating, drafts, working in wet clothes, overcrowding, and the use of community towels, soap and drinking glasses. Paper handkerchiefs and frequent washing of hands have value. The sneezer should be sent home. Prompt reporting of colds to ascertain a possible common source, is advisable.

Older and Handicapped Workers

The protection of employee health is but one aspect of the broader problem of placing every worker during the emergency at a task he is fitted to perform, notably the absorption by industry of older or handicapped workers.

Two papers which excellently presented this important subject, pointed out that even though the severity of disability may be greater in older workers, its frequency is less. Older workers are adaptable to change and can be retrained. At times it is feasible to slow the production line for the benefit of the older worker or to put more men on the line. The employment of older workers has a beneficial psychological effect on other workers by increasing their sense of security.

One study of handicapped workers showed that they presented fewer resignations, fewer absences, fewer accidents, less discharges for cause and greater earnings than non-handicapped. The handicapped are not inclined to suffer a second injury, as is commonly supposed (only 3 injuries were compensable, second injuries in a study of 34,000 injuries) and, placed in the proper job, the handicapped are just as efficient as the non-handicapped.

Newer methods of evaluating the handicapped's disability are constantly being devised. One of these is the new functional test of lung capacity, which augurs to be of tremendous importance, because workers affected with silicosis are known to have a work capacity which is strangely unrelated to the amount of disease demonstrated by chest x-ray. Likewise, new criteria are becoming available for more effective measuring of visual capacity, including simple and quick tests for near and distant vision, ocular muscle balance, and color and depth perception. Such tests will assist in the more effective utilization of handicapped workers and, consequently, may prove of unexpected significance in the emergency.

A participant in the Congress could not fail to feel that the free and democratic discussion of mutual problems as exemplified by the Congress, is the first requisite to the solution of the many problems, medical and non-medical, facing American industry today.

NEW LONDON JUNIOR COLLEGE

A DISTINCTIVE two-year engineering program to furnish adequately prepared men both for the defense program and for the normal industrial organization of the country is being conducted at the New London Junior College. The program, now in its second year, is the result of careful planning by educators and an advisory committee of the Norwich section, American Society of Mechanical Engineers.

The purpose of the program is to give the students an adequate knowledge of machine manipulation, a thorough training in drafting and designing, and extensive instruction in mathematics, physics, mechanics of materials, and other technical subjects. It also furnishes background college-level courses, and other activities which make for a well-trained and well-educated person.

Each student is at work on a practical problem in the machine shop, sometimes alone and sometimes in co-operation with several other students. At the present time several students are reassembling and preparing for operation a valuable 25 horsepower Diesel engine of the latest type. Another has finished his drawing of new bushings for a secondhand motor generator acquired by the college, and at the moment is turning them out on one of the lathes. A needed milling machine, vise and considerable equipment for the physics and other science courses have been completed. A hack saw now operating with a friction drive is being redesigned and rebuilt with a gear drive, by the students. Numerous other projects await their attention as the present ones are completed.

The machine shop, while small, includes a number of engine lathes, shaper, planer, drill presses, benches with vises, power grinder and arbor press. The machines are individually powered and adequately safety-guarded. A small tool crib forms part of the shop. The students are acquiring practice and facility in reconstructing machine tools; several of the machines now in the shop have been rebuilt at the college.

Adjoining the shop on one side is the science laboratory, well-equipped for work in chemistry, physics, and other sciences. On the other side is a new addition which houses the draft-

Editor's Note. This is one of an intermittent series of articles outlining the work and objectives of Connecticut's educational institutions. Reading this one should prove profitable to manufacturers seeking a source of manpower trained for defense work.



VIEW of drafting and designing student group.

ing classes and the engineering laboratory equipment. In the basement of the same building, known as the Science-Engineering Building, a small forge and heat treating shop is being prepared. The engineering equipment is being added to from time to time by generous friends of the college.

The machine shop and the drafting room form the core about which all courses are organized. The design made in the drafting room is developed in the shop. Many of the problems of the drafting room grow out of the demands of the shop. The sciences, pure and applied, eventually lead to an increased ability to work in both drafting room and shop.

The program has grown out of a study of two-year engineering work as offered by the large junior colleges on the west coast, several surveys of the needs of industry, discussions with manufacturers, and finally a consideration of all this information by an advisory group of engineers. These engineers, designated by the Norwich section, American Society of Mechan-

ical Engineers, are: chairman, Edward Dennison, chief research engineer of the Electric Boat Company of Groton, Connecticut; Walter Beaney, turbine and production engineer at the D. E. Whiton Machine Company of New London, Connecticut; and Achilles D. Andriola, engineer in charge of engine calculations at the Electric Boat Company at Groton, Connecticut. The members of this committee, cooperating closely with the administration of the college, spent many hours of work in preparing a program designed to accomplish the following purposes:

1. The ability to handle machine tools and machines and to understand their design, use, operation, and limitations.
2. The ability to go directly to a drafting board of a first-class industrial organization.
3. An understanding of industrial organization and management.
4. A thorough grounding in the theoretical bases of engineering insofar as they can be given in two years.

5. An understanding of the social, political, and scientific world in which we live, with a view to achieving a high level of personal integrity and social responsibility.

The drafting room preparation consists of considerable college-level theory as well as practice. Each student acquires the following background during his two years of study:

(a) A full semester of mechanics with particular emphasis on forces, motions and machines.

(b) A full year of engineering drafting with emphasis on fundamentals.

(c) A second year of drafting, including mechanisms of all kinds and leading to simple machine design.

(d) A full year of mechanics of materials with the specific purpose of applying it in machine design.

(e) A year of calculus and a year of shop mathematics as tool subjects.

The relationship with the American Society of Mechanical Engineers is a happy one. The Norwich section holds its meetings at the college, the students are invited to all of its meetings and attend them regularly. Its technical library is housed in the engineering wing and is available to both members of the society and the engineering students of the college.

The engineering program is based upon an assumption that the technical forces of industry may be divided, very roughly, into three groups. The first group consists of skilled and semi-skilled workers. They are better versed in the manipulation of machines than in setting up and understanding them and their relationship to the industrial organization. A second group consists of the graduates of four-year engineering colleges and schools. These men are often especially concerned with planning in its manifold ramifications, and with the necessary theory which underlies practice. The third group occupies an area which lies between the other two. It is not a well-defined area but it may be said to be one for which a technical or trade school of secondary level gives inadequate preparation and for which a four-year engineering education is not necessary. Most of its members are concerned directly with production.

There is evidence that industry has need of a very substantial number of young men to fill jobs in the third group mentioned, which may be termed the semi-professional group. The expanding defense program is creating an immediate need for many

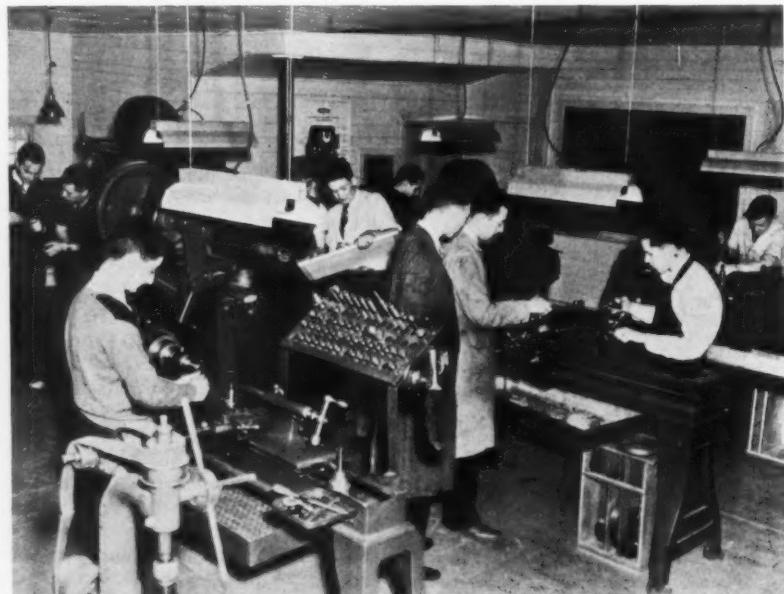
workers with an education and training of a different sort than that which is being provided through the valuable short courses designed to develop specified skills. It is estimated that industry normally needs from six to seven times as many semi-professional technicians as fully trained engineers. The graduates of New London Junior College expect to start at the bottom of the industrial ladder, work hard, and show, over a period of time, their ability to accept responsibility, meet new problems resourcefully, adjust to their fellow workers and the management, and always do a workman-like job.

The college, a non-profit organization, was made possible by a group of public spirited men and women who were encouraged by the generous gift of a beautiful forty-six acre, seaside campus. Ninety young men and women from five states constitute the unusually wholesome, eager, and friendly student body. In addition to its engineering course the college offers programs in business, secretarial science, and home management, all of which are completed in two years. It also offers a one or two-year general or exploratory program adapted to the needs and interests of the individual student. A limited number of students desiring to transfer with advanced standing to four year colleges and

universities are accepted. Several young but very able students are obtaining a year of college experience in a small and friendly group while achieving the maturity which they should have when they enter large four-year technical schools, colleges and universities.

Plans are now being made to offer next year a two-year course in Industrial Management for young men who are interested in the business side of industry, while an Industrial Secretarial course is being planned for both young men and women.

The college seeks earnestly to learn more and more about the personnel needs of industry and the best kind of education for the semi-professional group. It seeks to widen its circle of friends and supporters among manufacturers and it welcomes each opportunity to discuss the program with them. Visitors are always welcome, for it is believed that as the work becomes more generally understood, the College can make an increasingly significant contribution to the industrial community. The college looks forward to the day when manufacturers may care to establish scholarships for eligible high school graduates who, with such assistance, may obtain an intensive and practical, two-year college education which will enhance their value to industry and to society.



VIEW of students operating machines in the college machine shop.

NEWS FORUM

Acquisition

CAPTAIN BORIS SERGIEVSKY, noted flier and a former test pilot for Igor Sikorsky, has entered the manufacturing field for airplane parts as one of the incorporators of a new Bridgeport firm to be known as The Air Parts, Incorporated. Work started January 15 and will contribute towards the speeding up of airline production in the nation's defense program. The new factory employing 200 skilled mechanics will turn out airplane parts on a sub-contract basis, Capt. Sergievsky said.

The Office of the Secretary of State in Hartford granted The Air Parts, Inc. a certificate of incorporation on December 17. The authorized capital was listed at \$25,000 preferred and 200 shares of common no-par value stock. The amount of capital on hand at the start of business was listed as \$25,000. Murray Reiffin, of New York, and Irving A. Isaacs, of Scarsdale, New York, also are listed as incorporators.

★ ★ ★

THE CLAIRGLOW MANUFACTURING COMPANY, makers of metal and wire display cabinets and industrial finishes, will begin operations in Portland early in 1941 in a one-story plant. The building which has 6,500 square feet of floor space has been completely modernized and machinery is now being installed. Approximately 25 persons will be employed at first, but more employees will be added as business expands. The display cabinets will be sold to manufacturers for use in displaying their products in retail and wholesale outlets. Clairglow will also do industrial finishing.

ESSEX will be the site for a new firm to be known as the Pulverized Metals Corporation which will operate a foundry for the smelting, melting, pouring, casting, moulding, crushing and pulverizing of metals; also to grind, plane, finish, manufacture, purchase and sell tools, implements, gauges, steam specialties, machinery and similar articles. The authorized capital stock is \$75,000, divided into 250 shares of preferred stock of the par value of \$100 and 10,000 shares of common stock with a par value of \$5, and \$1,000 is the amount with which the corporation will commence business. Incorporators of the business are Arthur M. Krudmann, Doris E. Newman and Marie L. Cianci of New York City.

★ ★ ★

A NEW INDUSTRY to be located in the Quinebaug Mills seems assured to Danielson. The advancing of a loan of \$15,000 to the new corporation has moved forward so rapidly that the entire picture seems very bright. It is said that some of Danielson's very best financial, engineering and production minds have gone exhaustively into the proposition as submitted for consideration and have come to the conclusion that it is an industrial opportunity the community cannot afford to overlook, regardless of such financial risk as may be entailed. Action is under way for transferring title of the Quinebaug Mills from their present owners, the Wauregan-Quinebaug Mills, Inc., to the new ones—a Connecticut corporation, it was learned.

★ ★ ★

A NEW CORPORATION, Andover Kent, Inc., has taken over the

Middletown factory of Remington-Rand which has been idle since last May. The firm will make munitions, although operations will be delayed for some months until tools for manufacture are ready to produce.

Other Middletown industries have already been given pieces of National Defense work. So far almost half a million dollars in orders have been placed among the Russell Manufacturing Company, the Goodyear Rubber Company, the Lyman Gun Sight Corporation of Middlefield, the Welker Manufacturing Company of Cromwell, and the Frissell Fabric Company.

Calendar

AT THE December meeting of the Connecticut Vegetable Growers' Association, held at the Hotel Garde in Hartford, two resolutions were adopted as follows: (1) "Resolved that inasmuch as food is the basis of human life and that inasmuch as the Connecticut Vegetable Growers in convention assembled anticipate a serious labor shortage and possible reduction in necessary food production this coming spring and summer, we hereby request the cooperation and help, in solving this problem, of Chambers of Commerce, State Manufacturers' Association, State Department of Agriculture, Connecticut Agricultural Council, and make a special appeal through the Northeast Vegetable and Potato Council." (2) "Resolved that the Government equalize payment on vegetables in parity with tobacco and potatoes, also better vegetable acreage control in Connecticut Valley."

"Goods Well Displayed

are half sold." An old saying, but truer today than ever. Never has business been so keenly alive to the value of cartons and displays that catch the friendly notice of shoppers—that cash in on eye appeal at point-of-sale.

Haven't you room for a new Robertson idea at your place? Let's talk about it—maybe we can start something.

ROBERTSON
PAPER BOX COMPANY
MONTVILLE, CONN.
NEW YORK OFFICE
420 Lexington Avenue

CONFERENCES on economic topics of current interest are being held under the auspices of the Connecticut Economic Council in Bushnell Memorial Hall during January, February and March. The remainder of this year's schedule follows: February 17—"The World's Economic Situation Today", Neil Carothers, Professor of Business Administration, Lehigh University; March 3—"Can Democracy Secure Maximum Production?", Ralph E. Flanders, President of Jones and Lamson Machine Company; March 17—"Our Economic Responsibilities", Fred I. Kent, Bankers Trust Company. Tickets may be obtained by application at Bushnell Memorial Hall, at Gallup & Alfred, Inc. and at the offices of the Connecticut Economic Council.

★ ★ ★

A SERIES OF MEETINGS to be held during February, March and April by the New Haven Chapter of the National Association of Cost Accountants will include these subjects: "Inflation", February 4; "Income Tax problems created by the First and Second Revenue Act of 1940", February 11; "Controversial problems arising in the Observance of Industrial Law", March 11 (part No. 2 of this subject will be continued at the March 18th meeting); "Group discussion of Troublesome Accounting Problems", April 1. The meetings will be held from 7:30 P. M. to 10:00 P. M. in the Faculty Room, Strathcona Hall, Yale University, corner Grove and Prospect Streets in New Haven.

★ ★ ★

SPEAKING AT A JOINT MEETING of the Meriden Manufacturers' and Employers' Association held in Meriden January 16th, Dr. McCulloch outlined the efforts on the part of the State Board of Education to redirect schools of the state toward more practical education and learning. He also explained the state board's program for the year. Dr. McCulloch appeared at the meeting in place of Dr. Alonzo G. Grace, State Commissioner of Education, who was unable to be present.

A noonday luncheon was served to guests at the meeting held in the Home Club, under the direction of William J. Wilcox, Secretary of the Manufacturers Association. They included Raymond N. Brown, Superintendent of the Meriden Public

Schools; Raymond P. Walker, principal of the high school; Roy L. McLaughlin, Superintendent of the State School for Boys; Lawrence A. Smith, Director of the Meriden Trade School; John R. Feegel, State Commander of the American Legion; Charles A. Newton, Executive Secretary of the Meriden Chamber of Commerce, and Frank Geiger, of the Connecticut State Employment Service.

★ ★ ★

C.I.O. SECRETARY, James B. Carey, of Washington, D. C., spoke on the subject of "Labor and National Defense" at the Bridgeport Sunday Evening Community Forum, United Church, January 19. This is the first of two programs on the national defense program presented by the Forum. The second, "Industry and National Defense", will be discussed by H. Smith Richardson, Director of the National Association of Manufacturers January 26.

Celebration

WINCHESTER REPEATING ARMS COMPANY delivered its first Garand rifle to be produced on a commercial assembly, Friday, January 10 amid ceremonies attended by Major General Charles M. Wesson, army chief of ordnance; Brigadier Generals C. T. Harris and Burton O. Lewis of the Ordnance Office; Brigadier General G. H. Stewart, commanding officer of the Springfield Armory; Colonel Frederick H. Payne, Chief of the Hartford Ordnance District; and Joseph B. Ely, Philip B. Stanley, assistant chiefs of the Hartford Ordnance District; Colonel L. A. Codd of the Army Ordnance Association and other army officers and numerous industrial executives. The gun was tested by John C. Garand, inventor of the rifle and delivered to Major General Wesson. Winchester is producing on an order received sometime ago for 65,000 of these rifles, which up until January 10, had been produced exclusively at the Springfield Armory, Springfield, Massachusetts. The army was said to have approximately 100,000 of these on hand at the time Winchester started into production.

On the basis of army tests, the Garand "M-1" semi-automatic rifle is said to be the most effective infantry shoulder weapon in the world, increasing infantry fire power to nearly two

and one-half times that of infantry equipped with the Springfield rifle it is replacing.

Defense

AN ORDNANCE OFFICE of the War Department has been established in Bridgeport, headed by Major Stuart Naramore. The office will handle all ordnance functions in a section comprising most of Fairfield county. Other sub-offices have been set up in New Haven, Hartford, Waterbury and Springfield where manufacturers may obtain any information they are seeking.

The Bridgeport office, which has assumed the administrative, fiscal, personnel, inspection, engineering and contract negotiation duties of the main office, is now located in the Bridgeport Brass Company plant, but is expanding so rapidly that it will be necessary to move to other quarters within six weeks, the ordnance inspector stated.

★ ★ ★

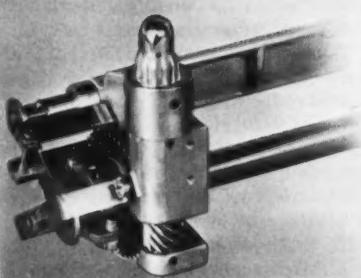
MAYOR McLEVY OF BRIDGEPORT, speaking at a luncheon meeting of the Bridgeport Chamber of Commerce, January 6th, stressed the fact that not a single anti-aircraft gun nor a single "defensive program or project has been set up in Bridgeport to protect the city's essential war industries." He also pointed out that drafting of Bridgeport's newly appointed firemen and policemen who were named through civil service, would cripple the foundation of the defense system established by the city. The mayor further warned the people of Bridgeport against falling "asleep at the switch" or being "lulled into a feeling of false security because we read about what is going on so far as defense programs are concerned."

Among the most important observations made by Mayor McLevy during his talk were the following:

"Suppose a major catastrophe happens to one of these vital industries? Do you think that you are going to get them rebuilt right away, if ever? The whole program is to take many of these major industries out of the New England area and the Atlantic seaboard and build them in the cornfields of the Middle West. Don't you think that it is time for the people of this vicinity and this section of the country to do something about defense them-



Mr. Knudsen asks:



"Have we done everything we can to utilize existing facilities and offer them to companies having defense contracts? Can we subcontract more of our work and spread it so as to make speed and more speed that way? Every manufacturing concern which has a defense contract should be informed of idle facilities in the locality so as to confine the new equipment as far as possible to special machinery."

This is in effect a call for Industrial Volunteers and in simple language we can all understand.

In direct response to Mr. Knudsen we take this means and opportunity to inform defense contractors that we have available facilities for punch pressing, milling, drilling and profiling.



PRESIDENT

THE GRAY MANUFACTURING COMPANY, Est. 1891
Hartford, Connecticut, Telephone 3-5258
230 Park Ave., New York City, Murray Hill 3-9772

Member of the Manufacturers Association
of Connecticut



selves? I do . . . It isn't only a question of destruction. It is a question of retaining the industries that we have here. After all, the building of defense bases three or four hundred miles out in the ocean may be good but you have got to build something right close here in order to protect our own interests and our own industries, and I feel that we ourselves should be alert. We should be demanding that something be done about this extremely important condition that prevails in the Bridgeport area."

Development

BRIDGEPORT is now said to be considering inquiries for factory space or locations made by some 35 concerns.

According to Raymond French, Industrial Secretary of the Chamber of Commerce, papers were almost signed for locating a canning factory to be owned and operated by the British Purchasing Commission when it was discovered that canning fumes would make living conditions unpleasant for some distance from the plant. He stated that he had recommended Milford and that an announcement would soon be made by the British firm about a plant there employing some 250 to 300 persons.

★ ★ ★

NEW DEPARTURE factory buildings in Elmwood containing some 200,000 square feet of floor space, were recently sold to the Industrial Estates, Inc., of New York City. It

is understood that this space will be rented either in part or whole at reasonable rates, thus opening up the possibility for the location of a number of new industrial enterprises in the greater Hartford area.

Died

HENRY JONES BLAKESLEE, 64, inventor of the electric meter tester and founder, president and treasurer of The States Company of Hartford, manufacturers of meter testing equipment, died early Sunday, January 19, at his home in Marlborough, Connecticut, after a short illness.

A native of Hartford, but a resident of Marlborough for fourteen years, Mr. Blakeslee held some thirty patents for meter testing equipment and on February 16, 1940, was one of the thirteen inventors honored as a Modern Pioneer at a banquet held at the Hartford Club on the occasion of the 150th Anniversary of the U. S. Patent System. He was one of thirteen Connecticut inventors and developers selected by the Awards Committee named by the National Association of Manufacturers to discover those inventors and developers throughout the United States who have contributed most to the development of our material civilization during the past twenty-five years.

Born in Hartford, August 15, 1876, a son of Villa Blakeslee, founder of the Skat Soap Company, West Hartford, and Mrs. Emma (Jones) Blakeslee, he graduated from the Hartford public schools and later attended Trin-

ity College where he secured a Master of Science Degree in 1898. He was first employed by the Hartford Electric Light Company, and later worked for the New England Association of Underwriters and the New York State Underwriters. For a short time he was superintendent of the Bureau of Gas and Electricity in Syracuse, N. Y., but in 1911 he resigned that position to form the States Company in Hartford.

He was a member of the American Institute of Electrical Engineers, the Hartford Engineers Club, the Board of Directors of the Hartford County YMCA, chairman of the Marlborough YMCA Committee, president of the Marlborough Christian Fellowship, chairman of the men's committee of the Tri-County Union, a director of the Tri-County Chorus, chairman of the finance committee of the Marlborough Church, of which he was a member, chairman of the committee which directed restoration of the Marlborough Church after the steeple fell on it during the 1938 hurricane, and a member of Alpha Chi Rho Fraternity at Trinity College.

He leaves his wife, Mrs. Emma (Pratt) Blakeslee, whom he married June 6, 1905; two sons, Heaton P. Blakeslee of Durham and John W. Blakeslee, at home; one brother, Roger H. Blakeslee; and one sister, Mrs. Jessie B. MacNaught, both of Marlborough; and one grandson.

Funeral services were held Tuesday, January 21, at the Marlborough Congregational Church, with the Rev. Elmer Thienes, pastor of the church, officiating. Burial was made in Fairview Cemetery, West Hartford.



IN HIS annual report the president of an important New England firm said, "I am pleased to report that the affairs of your company are in ship-shape condition. In order to deal effectively with the new set of problems with which all businesses are currently faced, changes had to be made. Time was important, therefore The Worden Company management engineers were employed to make recommendations that would assure making the right changes in the right way.

"As a result, improvements were made that increased net profits \$225,000 over last year. Other improvements are under way that will further reduce expenses and increase production."

The WORDEN COMPANY
MANAGEMENT ENGINEERS
STATLER BUILDING BOSTON, MASSACHUSETTS
"Our 10th year of leadership"

JOSEPH RALPH ENSIGN, chairman of the board of the Ensign-Bickford Company, life-long resident of Simsbury, died Wednesday afternoon, January 22, at his home, "Chestnut Hill", after a protracted illness. He was 73 years of age.

Son of the late Ralph H. Ensign and Susan (Toy) Ensign, daughter of the founder of the present Ensign-Bickford Company, manufacturers of safety fuses, he was educated in the Simsbury public schools, Hartford High School, and at Yale University where he was graduated in 1889. In 1891 he received his master's degree at Yale. Entering the fuse firm, of which his father was then general manager, September, 1890, he was steadily elevated in position until he became vice president in 1907 at the time of the company's incorporation. Upon the death of his father in 1917, he became president and continued in this capacity until 1935, when he became chairman of the board.

During his entire business life, Mr. Ensign had been active in church, civic and other organization work. He was an active member of the Simsbury Methodist Church, of which he was a trustee, a member of the official board and treasurer. While president of the Simsbury Cemetery Association he contributed funds for the purchase of the new north cemetery tract. He also served as vice president and director of the Simsbury Historical Society and trustee of the Simsbury Free Library.

Mr. Ensign was one of the original incorporators, and an officer and director of the Simsbury Electric Com-

pany and the Village Water Company. He was also chairman of the Simsbury School Board, and during his term of office the central school system was inaugurated. He contributed largely to the construction of the Tariffville School and the Central Grammar School and for a time served as a trustee of the Ethel Walker School for Girls in Simsbury.

At Yale he was a member of Alpha Delta Phi, Phi Beta Kappa and the Elihu Club. After graduation he became a Mason in the Simsbury Chapter and a Gentlemen of the Council of the Society of Colonial Wars. In 1935 he was awarded the honorary degree of M.A. at Wesleyan University.

He was a member of the Hartford Club, the Hartford Gold Club, the University Club of Hartford, the Graduates Club of New Haven, the Country Club of Farmington, the Yale Club of New York, the Wampanoag Country Club and Misquamicut Golf Club. He made his winter home on the grounds of the Mountain Lake Club of Florida.

He was always a staunch friend of the Manufacturers Association of Connecticut, having served a four-year term on the board of directors, and also on its Finance and Taxation Committee. His loss to the industrial fraternity of Connecticut is deeply mourned by the officers and directors of the Association, as well as a wide circle of industrial executives who knew and worked with him on a variety of industrial matters affecting industry in Connecticut.

Among his many gifts for educa-

tional and charitable institutions was the establishment, with his sisters, the Susan Toy Ensign Memorial Hospital in Nanchang, China. He was also the donor of the organ in the Wesleyan University chapel, made many contributions to Yale University, and left upon his death a substantial sum to the Hartford Hospital.

He was closely acquainted and respected by employes of the Ensign-Bickford Company. Mr. Ensign had also travelled widely through the United States and abroad.

He leaves his wife, Mrs. Mary Phelps Ensign; a daughter, Mrs. Frederick H. Lovejoy of Concord, Mass., and two sisters, Mrs. William Inglis Morse of Cambridge, Mass., and Mrs. Robert Darling of Simsbury.

The funeral was held at the Simsbury Methodist Church at 2:30 p. m. Saturday, January 25. Burial was made at Hopmeadow Cemetery, Simsbury.

★ ★ ★

ARTHUR G. KIMBALL, aged 60, president of Landers, Frary and Clark for 22 years and a director of the National Electrical Manufacturing Association, died early in morning of December 23 at the New Britain Hospital. His death, which came suddenly after a heart attack a few days previous, was a distinct shock to the community who were unaware of his illness.

Born in Evanston, Illinois, September 19, 1880, Mr. Kimball received his education in schools of Chicago, and at the age of 18 went to work in the Chicago office of Landers, Frary and Clark. Later in 1905 he was advanced

WESTCOTT & MAPES, INCORPORATED ARCHITECTS AND ENGINEERS NEW HAVEN, CONN.

LOW COST FACTORIES

LOW COST HOUSING

FOR DEFENSE NEEDS

REPORTS DESIGNS SUPERVISION



to the sales force of the company in the Missouri district where he remained until 1909 when he was called to resume new duties in the sales department. In 1911, he was elected assistant secretary and later was made vice president and on March 1, 1918 he was elected president to succeed Mr. Smith who became chairman of the board.

With Mr. Smith and other officers, he was the guiding spirit of the company in its expansion and marketing of electrical appliances in all parts of the world.

Always deeply interested in civic affairs, he was elected in 1926 as chairman of the committee to supervise the erection of a memorial shaft at Walnut Hill Park in tribute to the World War dead. Later he was appointed a member of the public welfare commission, a post which he held at the time of his death. He was director of the New Britain General Hospital, and a director of the New Britain National Bank.

Mr. Kimball was appointed in 1934 by General Hugh S. Johnson, then N.R.A. Administrator, as chairman of the N.R.A. code authority to administer the cutlery, manicure implement, painters and paperhangings, tool manufacturing and assembly industry. The code authority was supplementary to the fabrication metal products manufacturing and metal finishing and metal coating authority.

He was an active member of the old Drama League of New Britain and was elected president of the organization in January, 1929. He was made president of the Boy Scout Council on December 29, 1922 and was named as an alternate to the republican national convention in Chicago, in 1932. Mr. Kimball was a member of the Hartford Club, the New Britain Club and the Shuttle Meadow Club, and was a substantial contributor to the New Britain Choral Society.

Besides his wife, Mrs. Effie G. Kimball, he is survived by two sons, George E. Kimball, an assistant professor at Columbia University and Penn T. Kimball, a staff member of PM, New York daily newspaper; a daughter, Miss Elizabeth Kimball, directress of the Mark Twain Masquers, Inc., of Hartford; a brother, George T. Kimball, president of the American Hardware Corporation; two other brothers and two sisters in Chicago, and a granddaughter.

Private funeral services were held December 24 at his home, 61 Lexington

Avenue, New Britain, with Rev. Samuel Sutcliffe, rector of St. Mark's Episcopal Church, officiating. Burial was made at Princeton, New Jersey.

★ ★ ★

ALBERT M. VAN WAGENEN, Treasurer and General Manager of the Atlantic Carton Corporation, Norwich, Connecticut, died, January 3 following a three weeks' illness.

Born in Plutarch, New York on May 8, 1876, Mr. VanWagenen was married to Blanche L. Miller in Watertown, New York in 1900.

Formerly connected with the Robert Gair Company as manager of their Folding Box Department for a number of years up to 1916, he left their employ to found the Atlantic Carton Corporation with Walter E. Turner, the present president of the company.

Mr. VanWagenen was one of the most prominent citizens of Norwich since 1917, had been chairman of the Board of Education and a member of the board of directors of the Dime Savings Bank. He was also a member of the Rotary Club and a one-time member of the Board of Trustees of the Park Congregational Church with which he was affiliated.

He leaves his widow, one son, Albert M. VanWagenen, Jr., of Norwich; a brother, William M. VanWagenen of Yonkers, New York, a sister, Mrs. Elizabeth Perrine of Claremont, California, a grandson, Albert M. VanWagenen, 3rd; three nephews and one niece.

Funeral services were held at Park Congregational Church and conducted by Rev. Theodore M. Shipherd, D.D. with burial at Maplewood Cemetery.

Disaster

A LOSS OF \$50,000 was sustained by the Miller Company on Center Street in Meriden when a huge brick chimney collapsed early in January, destroying one factory structure and damaging two others. Because the collapse occurred on a Sunday rather than a week-day, no loss of life resulted. According to building inspector George W. Hollman of the City of Meriden, it was possible that the two recent earth tremors had weakened the chimney. He said that the age of the stack, somewhat over 50 years, contributed to its destruction, and added that the end may have been hastened through use of a powerful traveling

crane which is employed to carry heavy loads in one of the structures near the chimney base, a crane which causes vibration when in use, he pointed out.

The debris from the old chimney was entirely removed in less than forty-eight hours after its collapse which caused only a brief loss of employment to some 30 men, all others going back to their regular jobs or being assigned to work elsewhere in the plant. A new chimney, slightly smaller than the old, and 70 feet instead of 95 feet, is being built of steel with a brick interlining.

Education

THE THIRD PUBLIC SPEAKING COURSE under the auspices of the Bridgeport Tool Engineers Association, inaugurated January 7 at Hotel Barnum under the direction of Frank T. Whalen, a graduate of Pratt Institute and a foreman tool engineer at the Dictaphone Corporation, Bridgeport. The entire program, which teaches foremen to express themselves clearly to their workers, was developed by Mr. Whalen. Being a technically trained man himself, he noted some five years ago that many excellent technical workers were virtual failures as foremen because of their inability to transmit their knowledge to others. This observation caused him to organize the course in public speaking which met first in the Dictaphone plant after working hours.

★ ★ ★

EVENING COURSES IN ENGINEERING for men employed in industry are being offered during the second semester at the University of Connecticut. The courses, intended for men employed in industry in the eastern part of the state, will be a part of the University's new program for defense training. Some 300 students are enrolled in similar courses to start in Hartford at the Hartford Y.M.C.A. under the direction of the University School of Engineering with tuition costs paid by the United States Department of Education.

Tentatively offered at Storrs are courses in machine design, industrial electricity and production principles. Each course is being given for two class periods of two hours each week for a period of approximately 18 weeks, or the same schedule as in effect in

Hartford. Additional courses will be added whenever need arises and the number of the enrollment is satisfactory.

Other similar courses with some variation are being offered at Yale University, New Haven; Bridgeport Engineering Institute at Bridgeport. The entire program is under the supervision of the Committee for Engineering Training in Industry headed by Professor Lauren E. Seeley at Yale University. Other members of this committee are: Dean John H. Lampe, Connecticut University; Professor Philip G. Laurson, Yale University and E. Kent Hubbard, President of The Manufacturers' Association of Connecticut.

Courses may be initiated later at Waterbury, Meriden and Stamford.

Exhibition

AN EXHIBIT of phonograph record manufacture employed by the Columbia Recording Corporation was placed in the Burroughs Public Library—the fourth of a series of Bridgeport industries' exhibits. Demonstrating each operation in the manufacture of records by showing actual parts, the exhibit showed the process-by-process story of the conversion of a raw base material of hard shellac into an efficient sound-producing instrument.

The Columbia plant is now at its peak of record production, turning out thousands of popular and masterworks discs a day. Edward Wallerstein heads the administration staff as president of the Bridgeport plant, a subsidiary of the Columbia Broadcasting system.

★ ★ ★

BRIDGEPORT FACTORIES engaged in the manufacture of arms and ammunition for the National defense program are making arrangements with Morris Rosenthal, manager of the Loew-Poli-Majestic Theatre for the inspection by their employees of the patriotic motion picture "Land of Liberty". Factory executives, recently returned from Washington where they were asked to speed production on defense orders, have already attended a special preview of the film.

Expansion

JOHN R. SEXTON, tinsel products manufacturer, recently acquired land

and buildings from the Charles Parker Estate in Meriden. The four-story brick structure contains 20,800 square feet of floor space. Extensive alterations to the property cost about \$13,000. New and larger windows were installed in the former vise factory and the interior was painted and otherwise improved. Expansion was made necessary by the increased business enjoyed by the concern which has grown consistently since 1927, when Mr. Sexton, with two employees, started the manufacture of tinsel products with automatic machines of his own design. At the peak of production in 1940 he employed 85 persons and at present has between 55 and 60 working in the manufacture of colored tinsel ribbons and tape.

★ ★ ★

PURCHASE of the Eastern Malleable Iron Company's property by The Fafnir Bearing Manufacturing Company of New Britain was announced recently, although full details regarding the price paid and the amount of property involved are not available at this time.

Following this announcement comes word that the company will construct a large addition at a cost of more than \$100,000. The company's output is now in greater demand than ever, not only because of the accelerated use of fine bearings in modern airplane controls, but also because of increased use of bearings for industrial installations. This has resulted in the employee roll being increased to more than 2,300 although no additional space has been added to house the hundreds of new workmen hired.

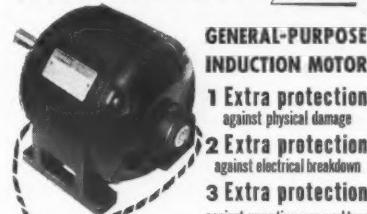
It is expected that four stories will be added to an existing two-story structure and in addition a six-story section will be constructed. Details of construction have not been worked out and no contract has been awarded for the work.

★ ★ ★

MANNING, MAXWELL & MOORE, INC., of Bridgeport, makers of pressure gauges, safety valves, industrial thermometers and globe valves, have leased 50,000 square feet of space in the former plant of Salter Looms, Inc. in keeping with a program for plant expansion. Likewise an entire sixth floor has just been added to the plant with new construction covering the entire block bounded by Howe, Elias, Nichols and Kossuth Streets. At the Boston plant of the

SET TO GO VIA Graybar

The New G-E TRI/CLAD



**GENERAL-PURPOSE
INDUCTION MOTOR**

- 1 Extra protection against physical damage
- 2 Extra protection against electrical breakdown
- 3 Extra protection against operating wear and tear

The new General Electric Tri-Clad induction motor is typical of the "front-rank" type of electrical equipment and supplies offered by GRAYBAR. You get new products promptly "via GRAYBAR," backed by personal service attuned to the local needs of more than 80 individual communities.

1, 1½, 2, 3 hp. sizes
now available



OFFICES IN
MORE THAN 80
PRINCIPAL CITIES

25 Union Street 344 Capitol Ave.
New Haven, Conn. Hartford, Conn.
New Haven 8-4163 Hartford 2-8266

DRINKING WATER

*For LOWER monthly costs
and better service—*

RENT

General Electric Water Coolers

ON THE RENTAL-EQUITY PLAN

THOMPSON

WATER COOLER CO.

AUTHORIZED G-E DISTRIBUTOR

New Haven 7-0115 Bridgeport 3-5787
Waterbury 4-3319 Hartford 5-2103

Authorized Distributor
GENERAL ELECTRIC
Water Coolers

RENTALS - SALES - SERVICE
Industrial Applications a Specialty

Thompson Water Cooler Company

New Haven 7-0115* Waterbury 4-3319
Bridgeport 3-587* Hartford 5-2103

Services At Your Door

THE HENRY SOUTHER ENGINEERING CO.

Engineering & Chemical Service

Research Facilities for Industry

Hartford, Conn.

WOODWORK

C. H. DRESSER & SON, INC.

Factory—Cabinet—Special Wood-work of All Kinds

287 Sheldon St. Hartford

PLATERS SUPPLIES—CHEMICALS

APOTHECARIES HALL COMPANY

Established 1849

WATERBURY, CONN.

MAYNARD ASSOCIATES

29 Leavenworth St.

WATERBURY, CONN.

Power Transmission Specialties

Gears to order—Spurs, Helicals, Worms and Wheels

Flexible Couplings for all types of machinery

Variable Speed V-Belt Pulley

Drives

Gear Reducers

D. P. Maynard C. H. Nye

SHEET AND STRIP STEEL FOR IMMEDIATE SHIPMENT

DOLAN STEEL PRODUCTS CORP.

151 Orange Ave., West Haven
Phone New Haven 9-1224

"The Only Steel Warehouse in Conn. Dealing EXCLUSIVELY in Sheet and Strip Steel"

WE SHEAR TO YOUR SIZE

company an additional four-story factory has been secured where the manufacture of Hancock steel valves will be carried on. Expansion of the firm's facilities was made necessary by the increased demand for products of its manufacture.



AN INCREASE of 75% in the business of the Heppenstall Company,

Bridgeport, over the past year has necessitated the construction of a 9,000 foot addition to the shipping room of the plant on Howard Avenue, it was learned. Employment at the company has risen 75% over the past year. The firm now employs 350. No increase in employment is anticipated in view of the new addition.



THE BRIDGEPORT BRASS COMPANY is already at work on a new addition which will add 50,000 square feet of floor space to its West Side plant. The office staff will then occupy the new addition which will consist of a two-story addition to the present laboratory building, making the present L-shaped building into a U-shape. Stone & Webster, general contractors, of Boston, are in charge of the work.



A NAVY DEPARTMENT AWARD of \$409,000 was made recently to the New Britain Machine Company for expansion to step up parts for airplanes. The company has been busily engaged for more than a year in the manufacture of these parts. Although the plant is "bulging" with production, no new building program is contemplated for the present.

Honored

FOUR VETERAN EMPLOYEES of the Jenkins Brothers Company, valve manufacturers of Bridgeport, were made members of the company's veteran league and each given a silver plate and an emblem in honor of having completed 25 years of service for the company at the 15th annual dinner of the group held at the Stratfield Hotel. The four employees honored were: Andrew Kot, Charles A. Sabol, Thomas Abramszyk and Leon J. Faszewski. Bernard J. Lee, Vice President and General Manager, was toastmaster at the meeting addressed by Farnham Yardley, President of the company.

Mr. Yardley stressed the need for sacrificial service, cooperation between industry and labor and government. Said he: "We need a return to that pioneering spirit—a willingness to suffer and persevere—if the nation that was builded for us is to endure. . . . While making our borders immune against attack, we must see that the economic life of the country goes

forward; we cannot be strong against attack if we are weak industrially; industry cannot flourish when it is overregulated, unfairly taxed and confronted by conflicting labor factors."



CHARLES E. ROLFE, Chairman of the State Development Commission was honored late in December for his work with the Commission by the presentation of a set of cufflinks from other members. Members of the 11 man commission present at the ceremony were: A. E. Payson, president of the American Thermos Bottle Company, Norwich; John J. Egan, secretary and legislative representative of the Connecticut Federation of Labor; Paul V. Hayden, power engineer, The Connecticut Light and Power Company, Willimantic; Francis C. Luce, president, Cyril Johnson Woolen Company, Stafford Springs; T. H. Beard, vice president, Dictaphone Corporation, Bridgeport; J. R. Neill, president, The Watertown Manufacturing Company, Watertown; and Willard B. Rogers, President, Bond Hotels, Hartford. Mr. Rogers presented the cuff links to Mr. Rolfe.

Mr. Rolfe, assistant to the President of the Southern New England Telephone Company, who has been chairman of the Development Commission since the 11 man board was named by former Governor Baldwin in 1939, has given unstintingly of his time toward the advancement of the work of the Commission, whose broad functions under the legislation creating it during the 1939 session of the General Assembly, permit it to pursue practically any and all lines of activity which will stimulate the economic welfare of the state. The Commission under Mr. Rolfe's leadership has sought to create among the citizens of Connecticut a more thorough appreciation of the contribution of agriculture, industry and recreation and to develop this triumvirate of economic functions both within and outside the state. One of its chief efforts has been directed toward the acquisition of new industries. It is to be credited with material assistance in securing a number of new industrial corporations for the state during little more than a year of actual full-time activities by a paid staff.

Prior to the time of his appointment to the chairmanship of the Commis-

sion, Mr. Rolfe was active in the State Publicity Commission, predecessor to the Development Commission.

Industrial Relations

ROBERTSON PAPER BOX COMPANY, Incorporated, Montville, has announced the signing of a Retirement Annuity Contract with the Connecticut General Life Insurance Company for the benefit of employees. A letter addressed to the employees of the company reads as follows: "We have been working on this plan for retirement income or pension for many months. It provides for the time when you will reach the age of retirement and is in addition to the Social Security payments you will receive. All employees who have been with the company continuously for five years and are between the ages of 30 and 59 will be eligible to join the plan."

The company will make certain contributions on account of past service for those employees who would have been eligible if this Retirement plan had been in effect in the past. This will cost the employees nothing. Future contributions will be made in equal amounts by the company and by the participating employees, based upon each one's earnings.

Complete details will be available in a few weeks, when all eligible employees will be given an opportunity to join. It is entirely voluntary and joining is not compulsory, but the advantages are such that we believe every one will want to join after it has been fully explained. This is another step in this company's program to better the welfare of our employees and promote more cordial employee-employer relations." The statement was signed by President Ralph A. Powers.

Moved

SAWYER DISPLAYS, an industry which moved from Durham, Connecticut to the long vacant Summit Thread plant in East Hampton, has moved its headquarters back to Durham. Some of the buildings in East Hampton are being torn down and material moved to Durham for constructing a new plant.

According to David W. Sawyer, owner of the advertising display plant, the rapid change of plans came fol-

lowing a misunderstanding of the tax assessment on the local plant. Mr. Sawyer maintains he moved to East Hampton with the understanding that the assessment would be \$6,000 for 3 years. John B. Ward, chairman of the Board of Assessors of East Hampton, denied that his group had hinted an assessment of \$40,000 as Mr. Sawyer had alleged.

Mr. Sawyer's firm is said to have had on hand more than \$60,000 in order for material to be used in national advertising campaigns.

Pay Check

THE YALE & TOWNE MANUFACTURING COMPANY, Stamford Division, announced a five percent pay increase in all piece work, hourly and salary rates, late in December, but retroactive to November 1, 1940. The increase affects 3,600 employees at the Stamford plant, and, it is estimated, will add approximately \$300,000 to the annual labor cost at the plant.

★ ★ ★

BRYANT ELECTRIC COMPANY and the affiliated Hemco plant, both subsidiaries of the Westinghouse Electric and Manufacturing Company, Bridgeport granted an eight percent monthly wage increase to some 1420 employees in December.

★ ★ ★

GENERAL ELECTRIC COMPANY, Bridgeport, has recently announced that between 300 and 480 employees of the local plant shared on December 20 in the available earnings under the G. E. Profit Sharing plan.

★ ★ ★

PRATT AND WHITNEY DIVISION of Niles-Bement-Pond increased the pay of their employees five percent effective January 5th. Some 3200 employees received the increase.

Personnel

FRANK W. CALDWELL, director of research for the United Aircraft Corporation, East Hartford, was recently named president of the Institute of Aeronautical Sciences. Mr. Caldwell, who has been with the

Hamilton Standard Propellers Division for the past 11 years, first as chief engineer, then as engineering manager, and since July, 1940, as research director, is a noted inventor and designer, being responsible for the development of the controllable-pitch propeller which won for Hamilton Standard the Collier Trophy of 1933 as the year's most valuable contribution to aeronautics. He was also awarded the Sylvanus Albert Reed Award in 1935 "for increasing the effectiveness of aircraft through the development and improvement of controllable and constant speed propellers."

★ ★ ★

W. ODEN HUGHART, secretary of the Charles Parker Company, was elected president of the Meriden Manufacturers Association at its January 9 meeting to succeed Clifford I. Packer, who headed the association for two years. Charles H. Cuno, President of the Cuno Engineering Corporation, succeeded Parker B. Allen, of the Meriden Gravure Company. Other officers and directors elected were: William F. Minor, vice president; and Edward Tredennick, treasurer; and William J. Wilcox, secretary. Directors re-elected were: Milton L. Gearin, of the New Departure division, General Motors, Inc.; G. Arthur Gustafson, of the General Electric Company, W. Oden Hughart, William F. Minor, Clifford I. Packer, of the Packer Machine Company; Albert W. Savage, of the Manning, Bowman & Company; Evarts C. Stevens, of the International Silver Company; Edward Tredennick and James F. McKenna, of the H. L. Judd Company, Wallingford.

★ ★ ★

ARTHUR E. ALLEN, a former vice president of the Westinghouse Electric Company and a director of Landers, Frary and Clark since July, 1939, was elected chairman of the board of directors of Landers, Frary and Clark Company on January 9 to succeed the late Charles F. Smith. Richard L. White, treasurer, was elected president to succeed the late Arthur G. Kimball. Bret C. Neece, a vice president, was elected a member of the board.

Mr. Allen, was born in Toronto, Canada, and spent his working career from 1902 to 1938 with the Westinghouse Electric Company with the exception of the years 1917 and 1918 when he served with the Royal Air Force. He retired from Westinghouse



The Legiscope

By PAUL ADAMS

WHAT YOU SAY MAY BE USED AGAINST YOU. A company which issued a statement of "Open Shop" policy found that in a National Labor Relations Board proceeding such a statement was relevant and material evidence and admissible as bearing upon the company's attitude. The 7th Circuit Court of Appeals said:

"It may have been an exercise of his Constitutional right of free speech, and yet illuminative as evidence of motive, intent, and attitude towards labor union activities of the employee".

Without making a specific holding, the court issued the following *dicta*:

"Expressions or opinions concerning labor unions, by an employer, either written or merely spoken, may be of such a nature that their effect is to coerce and intimidate the employees, contrary to the provisions of a National Labor Relations Act. To hold that such expressions, when employer manifestly intended to give them such an effect, are not violative of the Labor Act, would be to nullify the provisions of the Act and to thwart the public policy evidenced by said Act. (*N.L.R.B. v. Chicago Apparatus Co., C.C.A. 7, No. 7311, 12-40*)."

It is significant that the words "Open Shop" have apparently come to mean "anti-Union", at least in the minds of the court, and therefore action by employers, though not violative of the National Labor Relations Act *per se*, may become so if there is evidence of an "anti-Union" attitude by the employer.

"INVIDIOUS" LABOR BOARD PRACTICES are summarized in the most recent report of the House Committee investigating the activities of the Board, as follows:

1. Blacklisting litigants before it;

2. Promoting boycotts against parties whose cases it intends to adjudicate;
3. Denial to legitimate organizations of opportunities to appear and be defended in the very litigation that may destroy them;
4. Refusing to employees the privilege of testifying in their own cases;
5. Requiring industry to reinstate persons who were never employed and pay back wages to persons never on the payrolls; and to others who never even applied for employment;
6. Seeking to legalize as part of the American way of life the infamous, anarchistic sit-down strikes and persevering in this course even when rebuked by the Supreme Court of the United States."

A WRITTEN, SIGNED AGREEMENT is the final step in the collective bargaining process, thus concludes the U. S. Supreme Court in *Heinz Company v. N.L.R.B.* The court settled the controversy of the "written contract" which started some years ago and which has been a guarded precept of the Board and a bugaboo to some employers. The National Labor Relations Act, while requiring the employer to bargain collectively, does not compel him to enter into an agreement, but, the courts reason, an employer, having reached an agreement, cannot refuse to sign it.

"The freedom of the employer to refuse to make an agreement relates to its term in matters of substance and not, once it is reached, to its expression in a signed contract, the absence of which, as experience has shown, tends to frustrate the end sought by the requirement for collective bargaining."

NEWS FORUM

(Continued from page 23)

in 1938 but in 1939 became a director of Landers, Frary & Clark and since that time has been working in a consulting capacity.

Mr. White, the new president, has been treasurer since 1928 and a director since 1934. He started with the company as assistant treasurer of the Standard Vacuum Bottle Division in June, 1923 and became assistant treasurer of Landers, Frary & Clark in 1927. He is a director of the New Britain National Bank, Savings Bank of New Britain, Burritt Hotel Company, New Britain Institute, New Britain General Hospital, New Britain Welfare Society, Connecticut Plan for Hospital Care and the local chapter of the Red Cross. He is also a member of the Board of Finance and Taxation and treasurer and director of Goss & Deleew Machine Company.

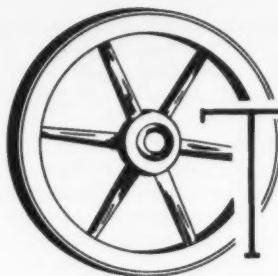
Mr. Neece, who was named a member of the board, entered the employ of the company in its sales division in 1924 and rose to sales manager of the vacuum cleaner and major appliances divisions, and was later advanced to general sales manager. He was made a vice-president in 1938, and now succeeds the late Arthur G. Kimball on the board of directors.

★ ★ ★

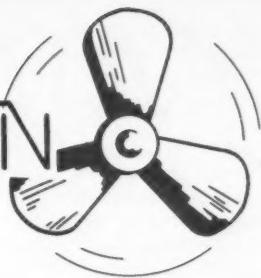
M. LYNN GUNDLACH, former eastern sales manager and a member of the board of directors of the R. Wallace & Sons Manufacturing Company, was appointed sales promotion manager of the plastics division of the American Cyanamid Company late in December. The company operates plastics producing factories in Bound Brook, N. J., and Stamford, Conn., and is now building a large plant in Wallingford.

Mr. Gundlach will work on sales operations, research production and distribution of all plastic materials

(Continued on page 28)



TRANSPORTATION



By N. W. FORD, *Traffic Manager*

Bureau of Water Carrier Appointments Announced. The Interstate Commerce Commission has announced the appointment of Mr. George E. Talmadge, Jr., of New York, N. Y., as Director and Mr. Ernst Holzborn of New Orleans, La. as Assistant Director of its Bureau of Water Carriers.

Mr. Talmadge, who was acting chairman of the Intercoastal Steamship Freight Association in 1936, has served on various committees of that Association and its predecessor, the United States Intercoastal Conference.

Mr. Holzborn has been engaged in various branches of water transportation for nearly thirty years at Mobile and New Orleans, having been one of the organizers of the Gulf Intercoastal Conference, chairman of the Mobile Steamship Association and Gulf manager for a number of important steamship companies.

★ ★ ★

North Carolina Trade Barrier Law Held Unconstitutional. The Supreme Court of the United States

dealt a heavy blow to efforts of states to erect barriers to interstate commerce when it declared unconstitutional a statute of North Carolina, imposing a \$250 annual tax on out-of-state merchants who, in order to obtain orders, display their products in rented hotel rooms within the state.

In presenting the Court's opinion, Justice Reed stated: "The freedom of commerce which allows the merchants of each state a regional or national market for their goods is not to be fettered by legislation, the actual effect of which is to discriminate in favor of intrastate business—whatever may be the ostensible reach of the language."

★ ★ ★

Rail Workers to Receive Pay Increases. Effective March 1, 1941, 70,000 railroad workers will receive wage increases, according to Col. Philip B. Fleming, Wage-Hour Administrator. The order establishes a 36 cents an hour minimum wage for track workers, red caps, dining car

waiters, office and other employees on trunk line railroads and a 33 cents an hour base rate for similar classes of employees on the short lines. About 65,000 of the more than 71,000 persons employed by the trunk lines, and 5,000 of the 21,000 employees of the short lines will get pay increases.

★ ★ ★

Freight Forwarder Bill Introduced in Senate. Comprehensive and permanent regulation of freight forwarding companies by the Interstate Commerce Commission would be provided by S. 210, which was referred to the Senate Interstate Commerce Committee by the Senate. The bill, which is designed as an amendment to the Interstate Commerce Act, would add a part IV to the present three parts of the act which govern rail, motor and water carriers, respectively.

In this bill a freight forwarder is defined as "any person, other than a carrier subject to parts I, II and III of this Act, who in the performance



ON HER WAY!

30 intercoastal ports hear American-Hawaiian's whistles . . . know that they herald the most frequent schedule in the intercoastal trade.

AMERICAN-HAWAIIAN
STEAMSHIP COMPANY

or discharge of any undertaking to transport property in interstate or foreign commerce for compensation utilizes or employs the instrumentalities or services of any carrier subject to parts I, II or III of this Act, or any combination thereof, and who may, in connection therewith, undertake, perform, or cause to be performed under his direction and control collection, delivery, or transfer services within terminal areas."

Among the highlights of the bill are:

1. Freight forwarders may establish reasonable through routes and joint rates, charges, and classifications, with other freight forwarders, but it shall be unlawful for any forwarder to establish any through route, joint rate, etc. with any carrier subject to part I, II, or III of the act.

2. Forwarders are required to file with the I.C.C., on the usual thirty days' notice, tariffs showing rates, charges, classification, rules, regulations, etc., and character of service afforded. Complaints as to unreasonableness of rates, charges, etc., may be filed with the I.C.C. which, after hearing and appropriate investigation, shall prescribe lawful rates, rules and regulations, as well as determine the maximum or minimum, or maximum and minimum, rates or charges thereafter to be observed. The I.C.C. is also given authority to prescribe just and reasonable divisions of rates between forwarders.

3. The "grandfather" date would be July 20, 1937 and any forwarder operating on and continuously since that date would be entitled to certificate without further proof that public convenience and necessity required its service.

4. It would be unlawful after January 1, 1942 for any officer or employee of any carrier subject to Parts I, II, or III of the act, or any person using the facilities or services of a forwarder, to own, lease, operate, control, or have any pecuniary interest in any such forwarder.

5. The act denies forwarders the status of a common carrier.

6. Although the Commission may postpone the effective date of any section, but not beyond July 1, 1942, Part IV shall take effect immediately upon its enactment.

★ ★ ★

Rail Proposal to Act as Agent of Shippers Opposed by Motor Carriers. Representatives of motor car-

riers, warehousemen and civic groups, at a brief hearing before Examiner Berry of the Interstate Commerce Commission, opposed a railroad proposal to cancel a tariff rule which forbids rail employees from acting as agents of shippers in assembling or distributing carload or less-than-carload freight.

Although he presented no witnesses, Mr. A. Lane Cricher, counsel for the American Warehousemen's Association, called attention to a brief that he had filed with the Commission, asking for an investigation of rail and motor carrier rules governing distribution and reforwarding of carload and less-than-carload freight.

"No legal authority need be supplied to support the statement that the duty of a common carrier is to carry," the brief stated, "and that it has no obligation and cannot be required to perform such shipper services as these tariffs provide."

February 8 was set as the deadline for filing briefs in the case.

★ ★ ★

Harmonized Bill of Lading. The railroads have approved as recommended, not mandatory, the use of the combination bill of lading form which has been under discussion by officers of the National Industrial Traffic League and the Association of American Railroads. The document is a bill of lading, way-bill and shipping order form, approved by the bill of lading committee of the League and a committee of the Association.

★ ★ ★

I. C. C. Submits 54th Annual Report. The 54th annual report of the Interstate Commerce Commission, recently submitted to Congress, suggests the desirability of giving the Commission emergency powers with respect to service by motor carriers and water carriers similar to those now accorded to it with respect to service by rail carriers.

The Commission is greatly impressed with the suggestion that it "experiment with a plan of prehearing conferences similar to those now so successfully conducted in the federal courts under the new Federal Rules of Civil Procedure and employed in certain proceedings before some of the other administrative agencies." The Commission has not found acceptable the idea that some of its functions could best be performed by following

the technique of investigation followed by Congressional committees.

Offsetting the alarm caused by the policy of the railroads since 1929 in contracting their equipment supply, the Commission finds that the railroads are able, "because of improved methods and conditions of operation, to do materially more work per unit of equipment than was the case when they had a greater supply and the further fact that the capacity of other forms of transportation has greatly increased."

In a discussion of the need for an investigation concerning sizes and weights of motor vehicles, the Commission said: "The ultimate question to be considered is whether the Federal Government can lawfully and should undertake to exercise control over this matter in the interests of a greater degree of uniformity and for the proper protection of interstate commerce. If need for federal action is demonstrated, the possibilities for working out a solution in cooperation with the states also require consideration."

INDUSTRY MEETS THE CHALLENGE

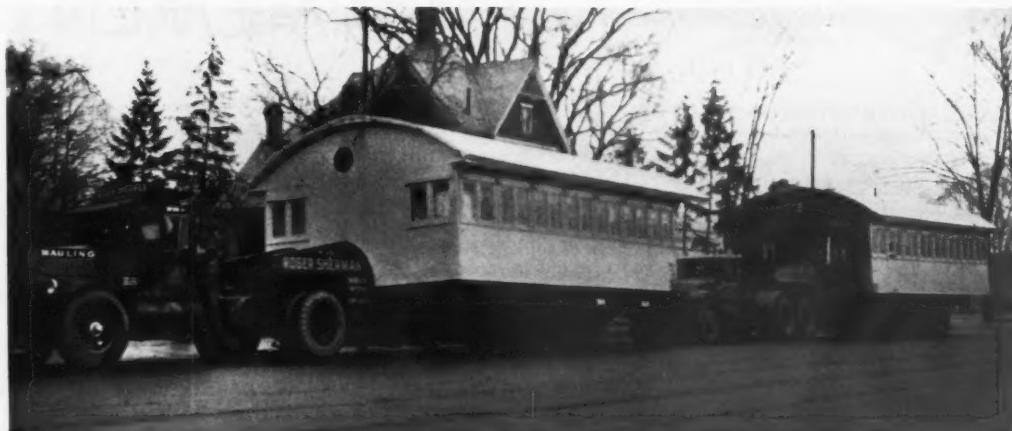
(Continued from page 8)

gencies, strikes and Acts of God. I am going to ask you to forget the delivery schedules and give us whatever you can in the way of advanced deliveries. I would not be surprised if they could be advanced 20%. The first half of 1941 is crucial, after that we are sure to be under way but if you gentlemen can help us better the deliveries so that we could be in swing in the second quarter, you will have done your country an outstanding service of protection, both of its shores and its institutions. And those of you who are toolled up now, please give us of your quantities as much more as is humanly possible. I would estimate very roughly that we are 20-25% toolled up now, using the quantities as a base. I forecast that with your help we could be 80% toolled up by April 1st and the balance by May 31st. This is naturally an overall figure which cannot be applied to specific items, but I consider it possible to attain. I ask you to help get it.

I thank you in advance for whatever you can give us, and I thank you for the privilege of addressing the producers of America who in our day are the front line of defense.

ROGER SHERMAN

TRANSFER CO.



THE diner (65' long and 16' wide) in the above photo was moved from Bristol to East Hartford in two parts in the record time of 27 hours. By cutting the diner in two parts and moving it on separate trailers with one state policeman as an escort, all traffic tie-ups were avoided.

Heavy Hauling . Rigging . Steel Erection

CRANES up to 60 ton capacity

BOOMS up to 150 feet

WINCH TRUCKS & TRAILERS up to 100 ton capacity

JUST ASK Bigelow Boiler Works

Chance - Sikorsky

Hamilton Standard Propeller

Pratt & Whitney Aircraft

New Departure Mfg. Co.

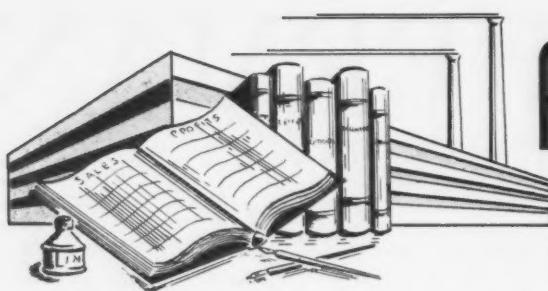
New Britain - Gridley Machine Co.

HARTFORD

8-4153

NEW HAVEN

6-1368



Accounting Hints for MANAGEMENT

(Contributed by HARTFORD CHAPTER, N.A.C.A.)

Industrial Research Costs. There is a wide variance in the practice of industrial concerns relative to the disposition in their accounts of expenditures for research purposes. The term research is defined as "careful or critical inquiry or examination in seeking facts or principles,—a diligent investigation in order to ascertain something". From an accounting viewpoint, in its broader aspects, research costs include expenditures for the development of new products, improvement of present products, development of new manufacturing methods, development of new and special machinery, cost of purchased patents, royalty on the manufacture of patented products, patent litigation expense, testing products, field service expense to cover supplementary development and to remedy complaints due to design of products after the delivery of products. Specifically, expenditures made embracing these purposes include the compensation of engineers, and draftsmen, indirect expense of the experimental department, material and expense incurred in manufacturing departments in making, testing and inspecting initial products while in process of development. In general, this gives us the descriptive background for the consideration of research and engineering costs.

Research expense may be segregated into four general classifications, with suggested disposition as follows:

- Development work on manufacturing methods. Under this category research costs may be charged direct to manufacturing expense since in most cases this is an ordinary expenditure in the course of manufacturing and in the improvement of production methods. However, under unusual conditions, some such major expenditure might be de-

ferred and liquidated over a reasonable period of time.

- Development work on new products is quite generally charged to Deferred Expense and liquidated over-production, through cost of sales, or by direct charge to profit and loss as an income deduction.
- Development work on products already manufactured covering minor changes and improvements would be charged generally to manufacturing expense.
- Pure research which is removed from a state of commercial production or successful development may be charged to Administrative Expense or direct to Profit and Loss as an income deduction assuming that such research is not directly associated with regular manufacturing processes or products.

It is usually desirable to segregate tool costs from the research account unless the tools were made specifically in conjunction with the experimental work. Obviously as the treatment varies with respect to these expenses even within the same industry, cost comparisons between manufacturers would tell little or nothing unless the basis of costing were clearly understood.

Another point for consideration with respect to the manner in which it is liquidated, is the effect on inventory valuation. If charged to factory burden when liquidated, the valuation of inventory on the basis of manufacturing costs would be inflated by the relative amount of development and research expenses included therein.

Although all possible efforts are now being devoted by industry toward defense production, executives must be far-sighted enough to prepare for

future eras and opportunities. Research work should be encouraged, and current earnings might well absorb the cost.

February Meeting. Under present conditions there is not too much thought being given to the subject of "Overhead Methods". Hartford Chapter N.A.C.A., however, will devote its February 18th meeting to a timely discussion of this subject. H. E. Howell, Controller, Grinnell Co., Inc., Providence, has been secured as the speaker. Mr. Howell is Vice President of the National Association of Cost Accountants, and a qualified and effective speaker.

NEWS FORUM

(Continued from page 24)

and will act in an advisory capacity with P. Bickford Watson, general factory superintendent, on matters of employment, housing and operation of the new Wallingford division, now under construction.

Pulse

AT THE HENDEY MACHINE COMPANY Torrington, a new two-shift, 55-hour a week schedule affecting approximately 1,200 employees has been announced by the management. The factory previously had been on a three-shift, 44-hour weekly routine. The new shifts will be from 7 a. m. to 6 p. m. and Saturday mornings; from 6 p. m. to 6 a. m. five nights a week with two one-half hour lunch periods. The foundry will be on a six-day, 10-hour schedule. The third shift will be rearranged so that a certain number will be employed in the other two shifts, and no lay-offs will result from the change.

HINTS For EXPORTERS

By W. ADAM JOHNSON

A Warning Note to United States manufacturers to build their new Latin American trade on a solid foundation is being sounded repeatedly by Government officials and foreign trade experts. From many sources comes information regarding pro-Nazi activities by representatives of American manufacturers. In a recent statement by Eugene P. Thomas, President, National Foreign Trade Council, Inc., New York, he said:

"Our country must be firmly united behind defense plans. During the first year of the present war we have discovered that it is the character of our total trade, not its dollar value, which is of paramount concern to a well-balanced economy. In efforts to liberalize our trade relations with Latin American countries, by buying more of their products, it is essential that our primary producers should not, owing to severe export losses during the war, be opposed to an enlightened plan for the consolidation of Pan-American economic power against totalitarian threats of economic penetration.

"The most effective method of meeting the Axis plans for a revolutionized world which will pay tribute to a 'Greater German Reich', is to unfold before the world America's alternatives for bringing about universal economic order. We should not postpone effective planning until the end of the war, if we propose to take a leading part in the final peace and reconstruction, which will concern us no less vitally than the warring nations."

★ ★ ★

From Information supplied by the Department of Commerce at Washington, we learn of a press interview with Professor Huhnke, a prominent official of the Reich Ministry and president of the German Advertising Council. Mr. Huhnke stated that it was the task of German business to convince foreign buyers that German economic

conceptions are more correct than the British, which, for a long time, have dominated international business, and above all to make them understand that the new German economic order would prove more advantageous for them. He emphasized, however, that in writing business letters, in choosing the best forms of advertising or in selecting his foreign agent, the German exporter should regard himself not only as a salesman for his product, but also "as a worthy representative of the new order."

Mr. Huhnke further stated that at present the Reich control over foreign advertising by German firms is guided by three principles, namely, those of leadership, cooperation and planning. All foreign advertising carried on by German firms has to pass through

an association set up for that purpose.

In further substantiation of the effect of Nazi propaganda in Latin America, Mr. Rovensky of the Council for Development of Inter-American Relations headed by Nelson A. Rockefeller, told Mr. Paul W. Adams, Counsel for the Manufacturers Association of Connecticut of the activities of many of the agents representing American concerns in those countries. Mr. Rovensky pointed out that they had learned of many cases where American dollars were actually being expended to promote Nazi propaganda. This is being done, of course, without the knowledge of the manufacturers but because the expenditure of funds for advertising in many cases is left to the discretion of the agent. The agent uses advertising contract as a lever to secure a pro-Nazi editorial policy in the items published by the paper. The Foreign Intelligence Service of the Government has rather complete information on all of those agents which are acting for American manufacturers but promoting the Nazi psychology. Hence, American manufacturers should give careful attention to determine in whose interest their agents are actually working. Every manufacturer should realize that if the Government requests that the services of a particular agent be discontinued, such request is based on first hand knowledge of the pro-Nazi character of the agent.

Recently Mr. Rockefeller issued a statement giving the substance of a report by an official mission which made a four-months' tour of Latin America and studied the business conditions there. Besides reiterating the foregoing, Mr. Rockefeller charged that many employes of U. S. firms or their Latin American affiliates are now members of local anti-American organizations. Many firms dealing exclusively in European products before the war, now have obtained agencies of U. S. producers. These agencies keep them alive and enable them to main-

IF
YOU HAVE AN
EXPORT PROBLEM

The Foreign Trade Department
of
The Manufacturers Association of
Connecticut, Inc.
and the
Cooperative Office of the
Bureau of Foreign and Domestic
Commerce

*Will Be Glad to Give You All
Possible Aid and Information*

Write for information on any of
the following subjects:

*Translation Service
Shipping and Packing Regulations
to Any Country
Advice on Foreign Trade Oppor-
tunities
Information on Foreign Buyers
Visiting in U. S.
Sales Information Reports
Tariff Information
Etc.*

436 Capitol Avenue
HARTFORD, CONNECTICUT

tain contacts. Some openly declare they will return to their old lines after the war. Confidential trade information is being made available to anti-American powers. Profits made from representing United States firms are being used to finance anti-American propaganda. Mr. Rockefeller further stated that American firms were in most cases acting unconsciously in furthering the Axis cause in Latin-America. He expressed the hope that when the conditions are brought to their attention the necessary steps to correct the situation would be taken of their own accord.

★ ★ ★

War Regulations. So many new war regulations are being put into effect that caution is necessary to make sure that shipments will get through. Through its bulletin service, the Association has kept its members fully informed as to all matters concerning the War Exchange Conservation Act of Canada, and the Export Control Act of the United States. Other important rulings are listed below:

Chile—The Consul General of Chile in New York reports that certificates of origin require consular legalization on all United States goods and on all goods of other countries having a most-favored-nation status in Chile. The certificate does not require consular legalization on goods of countries not having a most-favored-nation status in Chile (except Canadian goods) but even in these cases the shipper must present the certificate at the Consulate on freight shipments, with the bill of lading, to show that he has taken out the certificate and had it signed by a Chamber of Commerce.

Goods originating in more than one country may be covered by one set of certificates regardless of the number of countries of origin. In such cases, if any of the goods originate in a most-favored-nation country, the certificate requires consular legalization (*gratis*).

Ecuador—The number of the exchange authorization, issued in Ecuador must appear on the consular invoice. Likewise, it should be stated on the consular invoice whether the goods covered by the invoice are a partial or a total shipment of the quantities for which the permit was issued.

French Indo-China—The certificate of origin requirement has been suspended temporarily. No word has

been received of the suspension of the consular invoice requirement, which applies only on goods dutiable ad valorem. Parcel post shipments never require consular invoices, so that there are no longer any special documentary requirements on these shipments.

United Kingdom—Applications for approval of credits will not be considered unless the credit specifies that the goods are to be carried on an approved ship, that is: (1) a vessel sailing under the flags of the British Commonwealth (excluding Eire), Norway, Poland, Netherlands, Belgium, Sweden, Greece or U. S., or (2) a vessel chartered to the British Ministry of Shipping or British Commonwealth (excluding Eire), or (3) a vessel holding a ship warrant issued by the British Ministry of Shipping. A ship warrant is simply an approval to operate.

Venezuela—An import license is not necessary when the importer does not require foreign exchange from sources in Venezuela to effect payment.

On freight shipments the exporter must present a copy of the import license, with the consular invoice, to the Venezuelan Consul at the port of export in cases where the order has been received by mail from Venezuela and where the merchandise is to be paid for after clearance in Venezuela by drafts drawn by the exporter against the importer. The exporter forwards this license to Venezuela. It is not necessary to present the license on cabled orders, or when the goods are to be paid for in advance or by letter of credit, or on imports by the Government.

The Consul General of Venezuela in New York reports that when one shipment to one consignee comprises goods for which the license must be presented at the Consulate or where no license is required, separate consular invoices must be drawn. That is to say all the goods covered by the license (or licenses) presented at the Consulate must be on one consular

invoice, and the rest of the goods must be on a separate consular invoice.

★ ★ ★

British Navicert System—All navicert applications for Switzerland must give the name of a forwarding agent in Spain or Portugal.

A special optional procedure has been devised to assist shippers who cannot place their orders with manufacturers until navicerts are received and whose orders cannot be filled within the period of validity of the navicert. Particulars regarding this procedure may be had on request.

★ ★ ★

WILBERT WARD SPEAKER. The February meeting of the Foreign Trade Committee of the Association will be held at the Quinnipiac Club, New Haven, February 21, 1941. Dinner will be served at 6:30 P. M. and the meeting will start promptly thereafter.

Wilbert Ward, Assistant Vice President of the National City Bank of New York, the feature speaker, will talk on "Foreign Trade in War Times". Mr. Ward has headed the Export Commercial Credit Department for many years having joined the National City Bank of New York in 1917. He is also a lawyer and technical writer on subjects dealing with banking and finance.

Born in South Bend, Indiana, on December 5, 1888, he received his early education in the public schools of that city and then attended DePauw University from which he graduated in 1910 with the degree of B.A. He next began the study of law in which he received a degree from Columbia University in 1913. Shortly after this Mr. Ward began the practice of law in New York City, specializing in the liquidation of insolvent state banking institutions.

He began his new career in the Export Commercial Credit field with the National City Bank of New York, and has continued as head of this department until September 7, 1920 when he was appointed an Assistant Cashier. Mr. Ward was appointed an Assistant Vice President, March 27, 1923. His book "American Commercial Credits", published in 1923 has been generally recognized as a valuable addition to the library of banking practice.

**COOPERATION
In Export Shipping**
MOHEGAN
INTERNATIONAL CORPORATION
Dependable
FOREIGN FREIGHT FORWARDERS
To all parts of the world
17 STATE ST. N. Y. Tel. B09-0348

BUSINESS PATTERN

The vigorous upward sweep of general business activity in Connecticut in evidence since early summer, continued during December, the index rising 6 points above the already high November level. As a result, the index stood at 33% above the estimated normal, compared with 8% above for December a year ago. The expansion in production resulting from the armament program continued to be the dominating factor. Retail trade during the holiday season attained the highest level in recent years.

The volume of industrial activity in the United States rose 5 points to

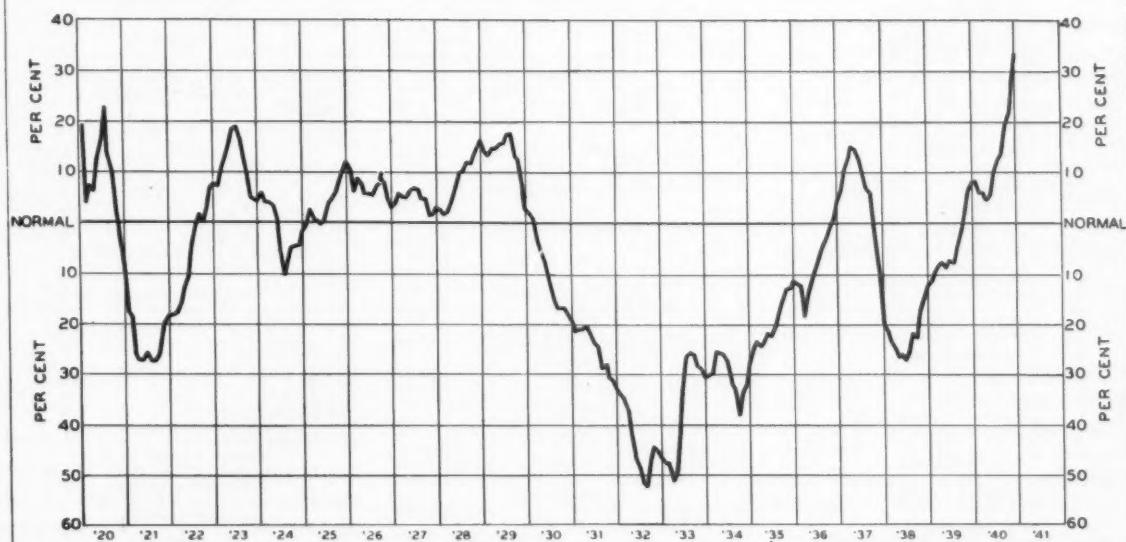
employment in Connecticut made a similar contra-seasonal advance. Housing shortages due to the influx of new employees to the manufacturing centers are being reported in various localities, particularly in Bridgeport. Substantial contracts continue to be placed by the Government with Connecticut concerns covering such diverse products as cotton blankets and wool service coats, artillery ammunition and submarine chasers.

Reflecting the increased government need for textile products, cotton mill activity in the State continued to expand rapidly during December,

storehouse unit for the Electric Boat Company at Groton to cost \$500,000, and an \$800,000 machine shop and office building at Bridgeport for the Bullard Company. Other lesser contracts were awarded for factory additions and alterations at Hamden, West Hartford, Bridgeport and Waterbury.

Weekly automobile production in the United States in early January recovered sharply from the holiday lull. Steel ingot production and operations in machine tool plants were restricted only by the productive capacity of these industries. In the

GENERAL BUSINESS IN CONNECTICUT COMPARED WITH NORMAL



19% above normal, the highest point since 1929.

Preliminary reports for January indicate continued expansion in production contrary to the usual seasonal trend.

The rate of operations in the manufacturing industries in Connecticut during December, contrary to the usual seasonal trend, continued to rise. The index of man-hours worked in Connecticut factories advanced to 45% above normal, an increase of 9 points over November. The number of man-hours worked in New Britain manufacturing establishments increased more than 8% over the previous month while gains averaging approximately 3% were realized in other cities in the State. Factory em-

reaching, after the usual adjustments for seasonal factors and long-term trend, the highest level in recent years.

The increase in freight carloadings originating in 14 Connecticut cities and metal tonnage carried by the New Haven Road in December was contra-seasonal, the indexes in each case reaching the highest levels in recent years.

Construction work in progress in the State during December, stimulated by accelerated residential construction and the expansion of various manufacturing plants, advanced several points to stand approximately at the estimated normal. The general contracts were awarded during the month for the construction of a shop and

latter industry, capacity in recent months has been expanding at the rate of 4% every thirty days.

The index of wholesale commodity prices in the United States, as reported by the Bureau of Labor Statistics, after remaining unchanged during the first three weeks of December, rose slightly during the last week. The average for the month showed but little change from the November level. The cost of living in the United States increased due principally to an advance in food prices.

Under the stimulus of the best holiday trade in recent years, department store sales in the United States during December rose to the highest level since 1929.



Ed. NOTE. This department, giving a partial list of products manufactured in Connecticut by company, seeks to facilitate contacts between prospective purchasers in domestic or foreign markets and producers. It includes only those listings ordered by Connecticut producers. Interested buyers may secure further information by writing this department.

(Advertisement)

Accounting Forms		Bathroom Accessories		Brass Goods	
The Baker Goodyear Co	New Haven	The Charles Parker Co	Meriden	Sargent and Company	New Haven
Accounting Machines		Bearings		Scovill Manufacturing Co (To Order)	Waterbury
Underwood Elliott Fisher Co	Hartford	New Departure Div of General Motors (ball)	Bristol	Brass Mill Products	Bridgeport
Acetylene	Meriden	The Fafnir Bearing Co (ball)	New Britain	Scovill Manufacturing Co	Waterbury
Connecticut Gas Products Co Inc		Norma-Hoffmann Bearings Corp (ball and roller)		Brass Stencils—Interchangeable	
Adding Machines	Hartford	Bells	Stamford	The Fletcher Terry Co	Box 415, Forestville
Underwood Elliott Fisher Co		Bevin Brothers Mfg Co	East Hampton	Brick—Building	
Advertising Printing	Hartford	The Gong Bell Mfg Co	East Hampton	The Donnelly Brick Co	New Britain
The Case Lockwood & Braimard Co		Sargent and Co	New Haven	Bricks—Fire	
Advertising Specialties	Hartford	The N N Hill Brass Co	East Hampton	Howard Company	New Haven
The H C Cook Co 32 Beaver St	Ansonia	Belting		Broaching	
Scovill Manufacturing Co (Made to Order)		Hartford Belting Co	Hartford	The Hartford Special Machinery Co	Hartford
The Waterbury Button Co	Waterbury	The Russell Mfg Co	Middletown	Brooms—Brushes	
Aero Webbing Products	Middletown	The Thames Belting Co	Norwich	The Fuller Brush Co	Hartford
Russell Mfg Co		Benches		Buckles	
Air Compressors		The Charles Parker Co (piano)	Meriden	The Hatheway Mfg Co (Dee Rings)	
The Spencer Turbine Co	Hartford	Bicycle Coaster Brakes		Bridgeman	Bridgeport
Aircraft—Repair & Overhaul		New Departure Div General Motors Corp	Bristol	The G E Prentice Mfg Co	New Britain
United Airports Div United Aircraft Corp	Hartford	Bicycle Sundries		John M Russell Mfg Co Inc	Naugatuck
Rentschler Field East Hartford		New Departure Div General Motors Corp	Bristol	B Schwanda & Sons	Staffordville
Airplanes		Binders Board	Manchester	The Patent Button Co	Waterbury
Vought-Sikorsky Aircraft, Div United Aircraft Corp	Stratford	Biological Products	Ivoryton	The Waterbury Button Co	Waterbury
Aluminum Castings		Ernst Bischoff Company Inc		Buffing & Polishing Compositions	
Newton-New Haven Co 688 Third Avenue	West Haven	Blocks		Apothecaries Hall Co	Waterbury
Aluminum Forgings		Howard Company (cupola fire clay)	New Haven	Lea Mfg Co	Waterbury
Scovill Manufacturing Co (small)	Waterbury	Blower Fans		Buffing Wheels	
Aluminum Goods		The Spencer Turbine Co	Hartford	The Williamsville Buff Mfg Co	Danielson
Scovill Manufacturing Co (To Order)	Waterbury	Colonial Blower Company	Hartford	Buttons	
The Waterbury Button Co	Waterbury	Blower Systems	Hartford	B Schwanda & Sons	Staffordville
Aluminum—Sheets & Colls		Colonial Blower Company	Hartford	The Patent Button Co	Waterbury
United Smelting & Aluminum Co Inc	New Haven	Bolters		Colt's Patent Fire Arms Mfg Co	Hartford
Ammunition		The Bigelow Co	New Haven	Scovill Manufacturing Co (uniform and fastened)	and tuck Waterbury
Remington Arms Co Inc	Bridgeport	Petroleum Heat & Power Co (domestic only)	Stamford	The Waterbury Button Co	Waterbury
Artificial Leather		Bolts and Nuts		Cabinets	
Zapon Div, Atlas Powder Co	Stamford	Clark Brothers Bolt Co	Middletown	The Charles Parker Co (medicine)	Meriden
Asbestos		The O K Tool Co Inc (T-Slot)	33 Hull St Shelton	Cams	
Rockbestos Products Corp (insulated wire, cable and cords)	New Haven	The Blake & Johnson Co (nuts, machine screw-bolts, stove)	Waterville	The Hartford Special Machinery Co	Hartford
The Raybestos Div of Raybestos-Manhattan Inc (brake lining, clutch facings, sheet packing and wick)	Bridgeport	Bottle Bobbins		Carpets and Rugs	
Assemblies, Small		Sonoco Products Co (Climax-Lowell Div)	Mystic	Bigelow-Sanford Carpet Co	Thompsonville
The Wallace Barnes Co Div, Associated Spring Corp	Bristol	Box Board		Carpet Lining	
Automobile Accessories		The Lydall & Foulds Paper Co	Manchester	Palmer Brothers Co	New London
The Rostand Mfg Co (windshields, seats, and body hardware)	Milford	National Folding Box Co	New Haven	Castings	
The Raybestos Div of Raybestos-Manhattan Inc (brake lining, rivets brass, clutch facings, packings)	Bridgeport	Robertson Paper Box Co	Montville	The Charles Parker Co (gray iron)	Meriden
Automotive Friction Fabrics		Boxes—Paper—Folding		The Bradley & Hubbard Mfg Co (gray iron, brass, bronze, aluminum)	Meriden
The Russell Mfg Co	Middletown	Atlantic Carton Corp	Norwich	The Gillette-Vibber Co (grey iron, brass, bronze, aluminum, also Bronze Bushing Stock)	
Automotive & Service Station Equipment		S Curtis & Son Inc	Sandy Hook	New London	
Scovill Manufacturing Co (Canned Oil Dispensers)	Waterbury	M S Dowd Carton Co	Hartford	The Sessions Foundry Co (gray iron)	Bristol
The Raybestos Div of Raybestos-Manhattan Inc (brake service machinery)	Bridgeport	National Folding Box Co (paper folding)	New Haven	John M Russell Mfg Co Inc (brass, bronze and aluminum)	Naugatuck
Bakelite Moldings		The New Haven Pulp & Board Co	New Haven	Malleable Iron Fittings Co (malleable iron and steel)	Branford
The Waterbury Button Co	Waterbury	Robertson Paper Box Co	Montville	McLagon Foundry Co (gray iron)	New Haven
Balls		Brake Lining		Newton-New Haven Co (zinc and aluminum)	688 Third Ave West Haven
The Abbott Ball Co (steel bearing and burnishing)	Hartford	Colt's Patent Fire Arms Mfg Co	Hartford	Philbrick-Booth & Spencer Inc (Grey Iron)	Hartford
The Hartford Steel Ball Co (steel bearing and burnishing, brass, bronze, monel, stainless, aluminum)	Hartford	The Raybestos Div of Raybestos Manhattan Inc (automotive and industrial)	Bridgeport	The Greist Mfg Co (white metal, slush, permanent moulds)	503 Blake St New Haven
Barrels		The Bridgeport Rolling Mills Co	Bridgeport	Scovill Manufacturing Co (brass and bronze)	Waterbury
The Abbott Ball Co (burnishing and tumbling)	Hartford	The Bristol Brass Corp (sheet, wire, rods)		Vanadium Metals Co (brass, bronze and aluminum)	Groton
The Hartford Steel Ball Co (tumbling)	Hartford	The Miller Co (Phosphor bronze in sheets, strips and rolls)	Bristol	Union Mfg Co (gray iron)	New Britain
		The Thinsheet Metals Co (sheets and rolls)	Meriden	Wilcox Crittenden & Co Inc (gray iron and brass)	Middletown
		Waterbury		Castings—Permanent Mould	
				The Bradley & Hubbard Mfg Co (zinc and aluminum)	Meriden
				Centrifugal Blower Wheels	
				The Torrington Manufacturing Co	Torrington
				Chain	
				John M Russell Mfg Co Inc	Naugatuck
				Chains—Bead	
				The Bead Chain Mfg. Co.	Bridgeport

IT'S MADE IN CONNECTICUT

—CONTINUED—

Chemicals

Apothecaries Hall Co Waterbury
MacDermid Incorporated Waterbury
American Cyanamid & Chemical Corp Waterbury

Chromium Plating

Chromium Corp of America Waterbury

Chucks & Face Plate Jaws

Union Mfg Co New Britain

Clamps—Wood Workers

Sargent and Company New Haven

Clay

Howard Company (Fire Howard "B" and High Temperature Dry) New Haven

Cleansing Compounds

MacDermid Incorporated Waterbury
Clutch—Friction

The Carlyle Johnson Mach Co (Johnson Expanding Ring; Multiple Disc Maxitorq) Manchester

The Raybestos Div of Raybestos-Manhattan Inc (clutch facings—molded, woven, fabric, metallic) Bridgeport

Comfortables

Palmer Brothers Co New London
Cones

Sonoco Products Co (Climax-Lowell Div (Paper)) Mystic

Consulting Engineers

The Stanley P Rockwell Co Inc (Consulting) 296 Homestead Ave Hartford

Contract Manufacturers

The Greist Mfg Co (metal parts and assemblies) 503 Blake St New Haven

Copper

The American Brass Co (sheet, wire, rods, tubes) Waterbury

The Bristol Brass Corp (sheet) Bristol
Scovill Manufacturing Co (pipe and service tubing) Waterbury (and rolls)

The Thinsheet Metals Co (sheets) Waterbury

Copper Sheets

The New Haven Copper Co Seymour

Copper Shingles

The New Haven Copper Co Seymour

Copper Water Tube

Bridgeport Brass Co Bridgeport

Cork Cots

Sonoco Products Co (Climax-Lowell Div) Mystic

Corrugated Box Manufacturers

The Danbury Square Box Co Danbury

Corrugated Shipping Cases

D L & D Container Corp 87 Shelton Ave New Haven

Gair Thanes Containers Div of the Robert Gair Co Inc Portland

Cosmetics

The J B Williams Co Glastonbury

Cotton Batting & Jute Batting

Palmer Brothers New London

Cotton and Jute Batting

The Gilman Brothers Company Gilman

Cotton Yarn

The Floyd Cranska Co Moosup

Counting Devices

Veeder-Rooft Inc Hartford

Cutlery

Remington Arms Co Inc Bridgeport

Cut Stone

The Dexitone Co New Haven

Cutters

The Standard Machinery Co (rotary board, single and duplex) Mystic

The O K Tool Co Inc (inserted tooth milling) 33 Hull St Shelton

Dictating Machines

Dictaphone Corporation Bridgeport

Die Castings

Newton-New Haven Co Inc 688 Third Ave West Haven

Dies

The Hoggson & Pettis Mfg Co 141 Brewery St New Haven

Die-Heads—Self-Opening

The Eastern Machine Screw Corp Truman & Barclay Sts New Haven

The Geometric Tool Co New Haven

Dish Washing Machines

Colt's Patent Fire Arms Mfg Co Hartford

Draperies

Palmer Brothers Co New London

Drop Forgings

Wilcox Crittenden & Co Inc Middletown

The Blakeslee Forging Co Plantsville

Atwater Mfg Co Plantsville

Edged Tools

The Collins Co (axes and other edged tools) Collinsville

Elastic Webbing

The Russell Mfg Co Middletown

Furniture

Gasoline

Glaziers

Grain

Glass

Gliders

Glue

IT'S MADE IN CONNECTICUT

—CONTINUED—

Labels		Mills Supplies	Pyrometers
J & J Cash Inc (Woven)	South Norwalk	Wilcox Crittenden & Co Inc	The Bristol Co (recording and controlling)
Lacquers & Synthetic Enamels		Moulded Plastic Products	Waterbury
Zapon Div Atlas Powder Co	Stamford	Colt's Patent Fire Arms Mfg Co	Radiation-Finned Copper
Ladders		The Watertown Mfg Co 117 Echo	The G & O Manufacturing Company
A W Flint Co	196 Chapel St New Haven	Lake Road	New Haven
Lamps		Watertown	
The Rostand Mfg Company (brass, colonial style & brass candlesticks)	Milford	Moulds	Railroad Equipment
The Greist Mfg Co (portable, office, floor, and novelty)	503 Blake St New Haven	The Hoggson & Pettis Mfg Co (steel) 141 Brewery St	The Rostand Mfg Co (baggage racks and mirrors for passenger cars)
Leather		New Haven	Milford
Herman Roser & Sons Inc (Genuine Pigskin)	Glastonbury	The Sessions Foundry Co. (heat resisting for non ferrous metals)	
Leather Goods Trimmings		Bristol	Rayon Yarns
The G E Prentice Mfg Co	New Britain	Nickel Anodes	The Hartford Rayon Corp
Letterheads		Apothecaries Hall Co	Rocky Hill
Lehman Brothers Inc (designers, engravers, lithographers)	New Haven	The Seymour Mfg Co	Razors
Lighting Equipment		Nickel Silver	Schick Dry Shaver Inc (electric)
The Miller Co (Miller, Duplexalite, Ivanhoe)	Ivano	The Seymour Mfg Co	Reamers
The Waterbury Button Co	Meriden	Nuts Bolts and Washers	The O K Tool Co Inc (inserted tooth)
Locks	Waterbury	Clark Brothers Bolt Co	33 Hull St
Sargent and Company	New Haven	Office Equipment	Shelton
Locks—Cabinet		Underwood Elliott Fisher Co	Railroad Equipment
The Excelsior Hardware Co	Stamford	Oil Burners	The Rostand Mfg Co (baggage racks and mirrors for passenger cars)
Locks—Suit-case and Trimmings		Malleable Iron Fittings Co	Milford
The Excelsior Hardware Co	Stamford	The Silent Glow Oil Burner Corp	Waterbury
Locks—Trunk		1477 Park St	
The Excelsior Hardware Co	Stamford	Petroleum Heat & Power Co (domestic commercial and industrial)	
Locks—Zipper		Oil Burner Wick	Raybestos Div of Raybestos-Manhattan Inc
The Excelsior Hardware Co	Stamford	Connecticut Gas Products Co Inc	Meriden
Machine Work		Oxygen Packing	Howard Company
The Hartford Special Machinery Co (contract work only)	Hartford	The Raybestos Div of Raybestos-Manhattan Inc (rubber sheet and automotive)	New Haven
The Torrington Manufacturing Co (special rolling mill machinery)	Torrington	Paints and Enamels	Resistance Wire
Machinery		The Tredennick Paint Mfg Co	The C O Jelliff Mfg Co (Nickel chromium, kanthal)
The Hailden Machine Company (mill)	Thomaston	Paperboard	Retainers
The Torrington Manufacturing Co. (mill)	Torrington	Gair Thanes Containers Div of the Robert Gair Co Inc	The Hartford Steel Ball Co (bicycle & automobile)
The Standard Machinery Co (bookbinders)		The New Haven Pulp & Board Co	Reverse Gear—Marine
Mystic		New Haven	The Carlyle Johnson Mach Co
Machines		Paper Boxes	Manchester
Andrew C Campbell Div American Chain & Cable Co Inc (cutting & nibbling)	Bridgeport	National Folding Box Co (folding)	Riveting Machines
The Patent Button Company	Waterbury	The New Haven Pulp & Board Co	The Grant Mfg & Machine Co
Machines—Automatic		Robertson Paper Box Co (folding)	Bridgeport
The A H Nilson Mach Co (Special)	Bridgeport	Paper Clips	The Raybestos Div of Raybestos-Manhattan Inc (iron)
Machines—Forming		The H C Cook Co (steel) 32 Beaver St Ansonia	Rods
The A H Nilson Mach Co (four-slide wire and ribbon stock)	Bridgeport	Paper Tubes and Cores	Clark Brothers Bolt Co
Malleable Iron Castings		Sonoco Products Co (Climax-Lowell Div)	Milldale
Malleable Iron Fittings Co	Brantford	Parallels Tubes	The Blake & Johnson Co (brass, copper and non-ferrous)
Marine Equipment		Sonoco Products Co (Climax-Lowell Div)	Waterville
The Rostand Mfg Co (portlights, deck, cabin and sailboat hardware)	Milford	Pharmaceutical Specialties	J H Sessions & Son
Wilcox Crittenden & Co Inc	Middlebury	Ernst Bischoff Company Inc	Bristol
Marking Devices		Phosphor Bronze	The Raybestos Div of Raybestos-Manhattan Inc (brass and aluminum tubular and solid copper)
The Hoggson & Pettis Mfg Co	New Haven	The Bristol Brass Corp (sheet)	Bridgeport
Matrices		Pipe	The Raybestos Div of Raybestos-Manhattan Inc (iron)
W T Barnum & Co Inc	New Haven	The American Brass Co (brass and copper)	Bridgeport
Mattresses		Howard Co (cement well and chimney)	Roof Coatings & Cements
Palmer Brothers Co	New London	Crane Company (fabricated)	Tilo Roofing Co Inc
Waterbury Mattress Co	Waterbury	Bridgeport Brass Co (brass & copper)	Stratford
Measuring Instruments		Scovill Manufacturing Co (copper, red brass and yellow brass)	Roofing—Built Up
The Bristol Co (long distance)	Waterbury	Pipe Fittings	Tilo Roofing Co Inc
Metal Cleaners		Malleable Iron Fittings Co	Rubber Chemicals
Apothecaries Hall Co	Waterbury	Platers	The Stamford Rubber Supply Co ("Factie" Vulcanized Vegetable Oils)
Metal Cleaning Machines		The Patent Button Co	Rubberized Fabrics
Colt's Patent Fire Arms Mfg Co	Hartford	The Plainville Electro Plating Co	The Duro-Gloss Rubber Co
Metal Goods		Platers—Chrome	New Haven
Bridgeport Brass Co (to order)	Bridgeport	The Plainville Electro Plating Co	Rubber Footwear
Metal Novelties		Platers' Equipment	The Goodyear Rubber Co
The H C Cook Co	32 Beaver St Ansonia	MacDermid Incorporated	Middlebury
The Waterbury Button Co	Waterbury	Plumbers' Brass Goods	United States Rubber Prod Inc (Keds, Kedettes, Gaytees, U S Royal Footwear)
Metal Products—Stampings		Bridgeport Brass Co	Naugatuck
J H Sessions & Son	Bristol	Scovill Manufacturing Co	Rubbish Burners
The Greist Mfg Co	503 Blake St New Haven	Bridgeport	The John P Smith Co 423-33 Chapel St
Scovill Manufacturing Co (Made to Order)	Waterbury	Waterbury	New Haven
Metal Specialties		Waterbury	Safety Fuses
The Excelsior Hardware Co	Stamford	Plainville	The Ensign-Bickford Co (mining & detonating)
The G E Prentice Mfg Co	New Britain	Plainville	Scissors
The Greist Mfg Co	503 Blake St New Haven	Plainville	The Acme Shear Company
Metal Stampings		Waterbury	Screw Machine Products
The Patent Button Co	Waterbury	Plainville	The Blake & Johnson Co
The Excelsior Hardware Co	Stamford	Plainville	Centerless Grinding Works
J H Sessions & Son	Bristol	Plainville	70 Knowlton St
The H C Cook Co	32 Beaver St Ansonia	Plainville	The Eastern Machine Screw Corp
The Greist Mfg Co	503 Blake St New Haven	Plainville	Truman & Barclay St
The Waterbury Button Co	Waterbury	Danielson	The Humason Mfg Co
Milk Bottle Carriers		Presses	Scovill Manufacturing Co
The John P Smith Co 323-33 Chapel St	New Haven	The Standard Machinery Co (plastic molding, embossing, and die cutting)	Screws
Millboard		Propellers—Aircraft	The Blake & Johnson Co (machine)
The Raybestos Div of Raybestos-Manhattan Inc (asbestos)	Bridgeport	Hamilton Standard Propellers Div	Sargent and Company
		United Aircraft Corp	Waterbury
		East Hartford	Clark Brothers Bolt Co
		Propeller Fan Blades	Meriden
		The Torrington Manufacturing Co	The Charles Parker Co (wood)
		Torrington	Scovill Manufacturing Co (cap and machine)
		Punches	Waterbury
		The Hoggson & Pettis Mfg Co (ticket & cloth)	Scythes
		141 Brewery St	Winsted Manufacturing Co
		New Haven	Winsted (Advt.)
		Putty Softeners—Electrical	
		The Fletcher Teriy Co	
		Box 415 Forestville	

IT'S MADE IN CONNECTICUT

—CONTINUED—

Sewing Machines	Stereotypes	Venetian Blinds
The Greist Mfg Co (Sewing machine attachments) 503 Blake St New Haven	W T Barnum & Co Inc	New Haven
The Merrow Machine Co (Industrial) 2814 Laurel St	The H' C Thompson Clock Co	Bristol
Shaving Soaps	Stop Clocks, Electric	Ventilating Systems
The J B Williams Co Glastonbury	Waterbury Mattress Co	Colonial Blower Company
Shears	Studio Couches	Vises
The Acme Shear Co (household) Bridgeport	Plainville Electrical Products Co	The Charles Parker Co
Sheet Metal Products	Switchboards	Washers
The American Brass Co (brass and copper) Waterbury	Rockbestos Products Corp (asbestos insulated)	The Blake & Johnson Co (brass, copper & non-ferrous)
Sheet Metal Stampings	Switches	American Felt Co (felt)
The American Buckle Co West Haven	Colt's Patent Fire Arms Mfg Co	Clark Brothers Bolt Co
The Patent Button Co Waterbury	Tableware—Stainless Steel	The Sessions Foundry Co (cast iron)
J H Sessions & Son Bristol	International Silver Co	H J Sessions & Son
Signals	Tanks	The Raybestos Div of Raybestos-Manhattan Inc (clutch washers)
The H C Cook Co (for card files) 32 Beaver St Ansonia	The Bigelow Company (steel)	Bernews Watch Co 30 Cherry St Waterbury
Silks	Tape	Waterproof Dressings for Leather
Cheney Brothers South Manchester	The Russell Mfg Co	The Viscol Company
Silverware	Tap Extractors	Webbing
International Silver Co (tableware, nickel silver, silver plate and sterling) Meriden	The Walton Co 94 Allyn St Hartford	The Russell Mfg Co
Silverware—Hotel & Institutional	Taps, Collapsing	Welding Rods
International Silver Co Meriden	The Geometric Tool Co	The Bristol Brass Corp (brass & bronze)
Silverware—Plated Hollowware	Tarred Lines	Wicks
International Silver Co Meriden	Brownell & Co Inc	The Russell Mfg Co
Silverware—Sterling & Plated Trophies	Textile Machinery	The Raybestos Div of Raybestos-Manhattan Inc (oil burner wicks)
International Silver Co Meriden	The Merrow Machine Co 2814 Laurel St	Wire Arches and Trellis
Silverware—Sterling Silver Hollowware	Textile Mill Supplies	The Bristol Brass Corp (brass & bronze)
International Silver Co Meriden	Ernst Bischoff Company Inc	The Driscoll Wire Co (steel)
Silverware—Tableware, Silver	Thermometers	Hudson Wire Co Winsted Div (insulated & enameled magnet)
International Silver Co Meriden	The Bristol Co (controlling, recording and indicating)	The Atlantic Wire Co (steel)
Silverware—Tableware, Silver Plate	Thin Gauge Metals	The Platt Bros & Co (zinc wire)
International Silver Co Meriden	The Thinsheet Metals Co (plain or tinned in rolls)	P O Box 1030 Waterbury
Silverware—Tableware, Sterling	Thread	Rockbestos Products Corp (asbestos insulated)
International Silver Co Meriden	Max Pollack & Co Inc	Scovill Manufacturing Co (brass, bronze and nickel silver)
Sizing and Finishing Compounds	Threading Machines	Wire Baskets
American Cyanamid & Chemical Corp Waterbury	The Grant Mfg & Machine Co (double and automatic)	Rolock Inc (for acid, heat, degreasing)
Smoke Stacks	Time Recorders	Wire Cable
The Bigelow Company (steel) New Haven	Stromberg Time Corp	The Bevin-Wilcox Line Co (braided)
Soup	Timers, Interval	Wire Cloth
The J B Williams Co (industrial soaps, toilet soaps, shaving soaps) Glastonbury	The H C Thompson Clock Co	The C O Jelliff Mfg Co (All metals, all meshes)
Special Parts	Tinning	The John P Smith Co 423-33 Chapel St
The Greist Mfg Co (small machined, especially precision stampings) 503 Blake St New Haven	Wilcox Crittenton & Co Inc	East Hampton
Sponge Rubber	Tools	The Hoggson & Pettis Mfg Co (rubber workers)
The Sponge Rubber Products Co Derby	A C Gilbert Company	141 Brewery St New Haven
Spreads	The Gong Bell Co	The O K Tool Co Inc (inserted tooth metal cutting)
Palmer Brothers Company New London	The N N Hill Brass Co	33 Hull St Shelton
Spring Units	Toys	Wire Drawing Dies
Owen Silent Spring Co Inc (mattresses and upholstery furniture) Bridgeport	The Excelsior Hardware Co	The Waterbury Wire Die Co
Spring Washers	Trucks—Lift	Wire Dipping Baskets
The Wallace Barnes Co Div Associated Spring Corp Bristol	The Excelsior Hardware Co (lift)	The John P Smith Co 423-33 Chapel St
Springs—Coil & Flat	Trucks—Skid Platforms	Wire Forms
The Humason Mfg Co Forestville	The Excelsior Hardware Co (lift)	The Humason Mfg Co Forestville
The Wallace Barnes Co Div Associated Spring Corp Bristol	Tube Clips	The Wallace Barnes Co Div Associated Spring Corp Bristol
Spring Coiling Machines	The H C Cook Co (for collapsible tubes)	Wire Goods
The Torrington Manufacturing Co Torrington	32 Beaver St Ansonia	The Patent Button Co Waterbury
Springs—Flat	Tubing	The American Buckle Co (overall trimmings)
The Wallace Barnes Co Div Associated Spring Corp Bristol	The American Brass Co (brass and copper)	Scovill Manufacturing Co (To Order) West Haven
Springs—Furniture	Scovill Manufacturing Co (copper alloys)	Wire Mesh
Owen Silent Spring Co Inc Bridgeport	Waterbury	Rolock Inc (all meshes and metals)
Springs—Wire	Tubing—Condenser	Wire Reels
The Wallace Barnes Co Div Associated Spring Corp Bristol	Scovill Manufacturing Co	The A H Nilson Mach Co
Stamping—Small	Typewriters	Wire Partitions
The Wallace Barnes Co Div Associated Spring Corp Bristol	Underwood Elliott Fisher Co	The John P Smith Co 423-33 Chapel St
Stair Pads	Typewriter Ribbons	Wire Rings
Palmer Brothers Company New London	Underwood Elliott Fisher Co	The American Buckle Co (pan handles and tinnier's trimmings)
Stamps	Underclearer Rolls	Woodwork
The Hoggson & Pettis Mfg Co (steel) 141 Brewery St New Haven	Sonoco Products Co (Climax-Lowell Div)	C H Dresser & Son Inc (Mfg all kinds of woodwork)
Stampings—Small	Vacuum Cleaners	Yarns
The Wallace Barnes Co Div Associated Spring Corp Bristol	The Spencer Turbine Co	The Ensign-Bickford Co (jute carpet) Simsbury
Staples	Valves	Zinc
Sargent and Company New Haven	Reading-Pratt & Cady Div American Chain & Cable Co Inc	The Platt Bros & Co (ribbon, strip and wire)
Steel Castings	Valves—Automatic Air	P O Box 1030 Waterbury
The Hartford Electric Steel Co (carbon and alloy steel) 540 Flatbush Ave Hartford	Beaton & Cadwell Mfg Co	Zinc Castings
Malleable Iron Fittings Co Branford	Beaton & Cadwell Mfg Co	Newton-New Haven Co Inc 688 Third Ave West Haven
Nutmeg Crucible Steel Co Branford	Beaton & Cadwell Mfg Co	(Advt.)
Steel—Cold Rolled Spring	Valves—Flush	
The Wallace Barnes Co Div Associated Spring Corp	Beaton & Cadwell Mfg Co	
Steel—Cold Rolled Stainless	Valves—Relief & Control	
Wallingford Steel Company Wallingford	Beaton & Cadwell Mfg Co	
Steel—Cold Rolled Strip and Sheets		
Wallingford Steel Company Wallingford		
Steel Goods		
Scovill Manufacturing Co (To Order) Waterbury		
Steel—Magnetic		
Cinaudagraph Corp 2 Selleck St Stamford		

SERVICE SECTION

On account of space limitations, the material and used equipment items offered for sale by Association members have not been classified by sizes or usage best adapted. Full information will be given on receipt of inquiry. Listing service free to member concerns. All items offered subject to prior sale.

FOR SALE—RENT—WANTED

WANTED—JOB WORK. Special machinery and parts made to order. 73 years' experience manufacturing machinery at your disposal. Your inquiries are solicited. Address S. E. 115.

WANTED—TO BUY. Nos. 4½, 5, 5½ Bliss single action double crank straight side presses. Nos. 103, 104, 105 Bliss double crank inclinable presses. No. 3 L. & J. inclinable press. Address S. E. 127.

FOR SALE 2—40 H. P. 720 R.P.M. Type MT-346 G. E. Motors, Form B, 220 V. 3 phase 60 cycle with controller. Reasonable price. Condition as good as new. Address S. E. 128.

WANTED. Contracts for white metal castings and light stampings in any metal. Also finishing in all plates, silver, gold, brass, bronze, copper and all combinations of same. Address S. E. 129.

DEFENSE CONTRACTOR desires to locate sub-contractors who are equipped with Bullard Vertical Turret Lathes or horizontal turret bar or chucking machines. Please address S. E. 134.

FOR RENT—Second floor of building containing 5,000 square feet; load capacity 150 lbs. per square inch; 13 foot ceilings with sprinkler system; wood floors; good ventilation and light. Heat will be supplied. Organization connected with woodworking desired. Address S. E. 135.

FOR SALE—One 10,000 gallon Caldwell 3" Cypress wood tank 14' diameter 9' 4" deep, with iron I beam bottom supports. Good condition. Reasonable. Address S. E. 137.

LARGE WEST COAST CORPORATION seeks exclusive representation for some good product or line. This concern dates back 25-30 years and has embraced a variety of efforts by men of many years' experience, thoroughly versed in the technique of selling and promotion, regardless of what the product may be. Satisfactory references can be given. Address 138.

WANTED MACHINING done by manufacturers who desire to machine parts for National Defense and who are equipped with Bullard Vertical Turret Lathes or horizontal turret bar or chucking machines. Please address S. E. 139.

EMPLOYMENT

AGE 30 MECHANICAL ENGINEER—Purdue—Practical experience in Connecticut industries, factory management, modern production methods, etc., purchasing. Government requirements for lethal or related manufacturing. Want position where intensive production is in process of development. Address P. W. 559.

FORTY PLUS OF CONNECTICUT offers highly trained men as follows: Accountants, Auditors, Advertising, Sales, Engineers, Personnel, Financial, Production, Publicity writers, Administrators, etc. All service gratis. Write us your requirements—we cover the United States through National Forty Plus, 232 Asylum Street, Hartford, Connecticut.

EXECUTIVE ENGINEER with over 20 years experience in design for economical production as well as development work covering a diversified field of machinery. Has knowledge of mass production, cost and sales. A good administrator. Address P. W. 563.

CAN YOU USE A QUALIFIED WORLD WAR VETERAN IN YOUR PLANT? If you have an opening for such a man in your organization put in a call to any office of the Connecticut State Employment Service asking for Veteran qualified for your particular job. If he is not available in this office, a check will be made to locate one. Thus you will be helping to help a worthy group to a "job in private industry". Address P. W. 567.

JOURNALIST with 19 years experience in executive publishing, writing, editing and 2 years in industry desires position in public relations, publicity or personnel work where organization, initiative, responsibility, and ability to handle people and situations are needed. Age 42, college graduate (Yale 1919). Adaptable to any circumstances or problems and accustomed to major responsibility in planning, directing and carrying out ideas. Address P. W. 568.

POSITION WANTED by a past 20 years chief executive of metal working plants having unusual experience in finance, costs, sales, produc-

tion and purchasing. Thoroughly familiar with New England markets. Due to reorganization, available at once. Address P. W. 569.

EXECUTIVE ASSISTANT, resident of Hartford. Especially qualified to handle work such as production and sales control, cost and payroll work. Many years experience with nationally known companies, selling as well as installing. Standard costs—budget control and many other special accounting applications. Desires to make connection that will not require traveling. Address P. W. 570.

COLLEGE GRADUATE, male, 29 years of age, with 2½ years general experience in a Connecticut manufacturing company. Has just completed commercial school and desires position as male secretary or stenographer. Ultimate goal is executive ranking. Address P. W. 571.

FACTORY MANAGER—with over 25 years experience in metal goods manufacturing, having had complete charge of production and management, seeks similar connection where his services would be of value. American born, age 48, married. Can furnish best of references. A personal interview solicited. Address P. W. 572.

EXECUTIVE—practical mechanic with creative ability. Management and engineering background with wide diversified experience metal products. Address P. W. 573.

SALES MANAGER—Resourceful, thinks out of the rut, goes for profitable sales. Mature, energetic, experienced from direct sales to national distribution. Chances are good he is the "right man" you've hoped for and now need. A talk will tell. Address P. W. 574.

HOME ECONOMIST AND SALES PROMOTION EXECUTIVE with eight years business experience desires position. Trained public speaker. Wide acquaintance with leading club women in entire metropolitan area. Excellent following. Good background in educational films, publicity and promotion. Well groomed, smart, agreeable personality. Protestant. For interview address P. W. 575.

GRADUATE ACCOUNTANT with experience in insurance and manufacturing firms seeks position in Hartford or vicinity. Has studied business law, business organization and management, systems, costs, etc. Address P. W. 576.

YOUNG MAN WILLING TO START FROM SCRATCH in order to be closer to home. College graduate specializing in all phases of advertising and sales promotion. A decided asset to any firm. Detailed experience, education, personal background and references upon request. Address P. W. 577.

HIGHLY ENDORSED, VERSATILE EXECUTIVE with a bent for organization can help you reach your 1941 objectives. Over 18 years of successful application of the principles of research and promotion to industrial, commercial and civic problems. Negotiations supported by exhibits of definite results with a variety of big projects. Address P. W. 578.

ADVERTISING, MERCHANDISING AND SALES PROMOTION MANAGER with a wealth of organizing and production experience seeks position where his services will be of value along more specialized lines. Portfolio of publicity and promotional material available. Connection in New York State and New England desired, but willing and free to move to any locality. Address P. W. 579.

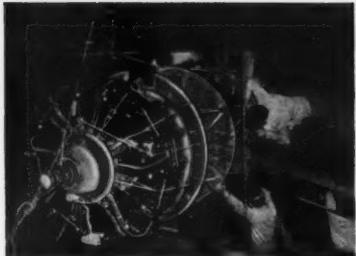
AMBITIOUS, capable young man of 28 desires position as Cost Accountant or Auditor in organization where initiative and ability count. Able to handle personnel and meet people. Excellent references. For an interview address P. W. 580.

SALES EXECUTIVE—Twenty years successful experience merchandising building products. Structural engineering and architectural background. Desires permanent connection where ability and experience will prove valuable. Gentle, American born. References. Personal interview requested. Address P. W. 581.

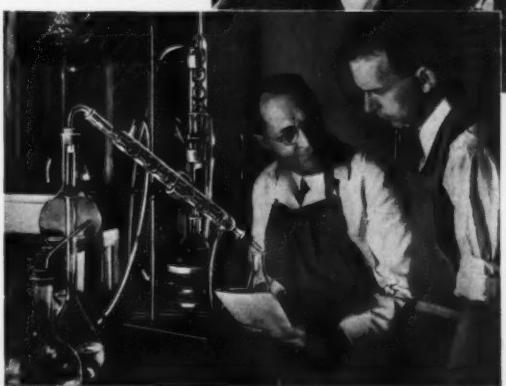
EXECUTIVE with a flair for effective organization can help you with your 1941 problems. Well recommended. Over 18 years of experience in the application of the principles of research and promotion to major problems of an industrial, commercial and civic nature. Negotiations supported by exhibits of definite results with a variety of big projects. Address P. W. 582.

ALERT TRAFFIC MAN is seeking association with a progressive company. Has been employed for the last five years by one of the largest shippers in the state. Address P. W. 583.

ADVERTISING MAN. Young man just over thirty who has had over ten years industrial and agency advertising experience and who has been both assistant and advertising manager, now seeks a broader field in industrial sales promotion and advertising than now afforded in his present agency connection. Here is a real find in the promotion field. Address P. W. 584.



YOU CAN HELP DEFEND **THE NATION'S FIRST-LINE DEFENDERS**



*Branches in 62 of the
Country's Principal
Cities*

including: Bridgeport, Conn.,
Newfield Building, 1188 Main
Street — Hartford, Conn.,
Essex Building, Trumbull
and Lewis Streets.

Injuries to industrial workers have always increased in times of increased production.

"More production!" is the cry. Thousands of men find new work; men not fully trained must do important jobs. Everybody feels the urge to *rush*. Accidents, crippling men and production schedules, result.

America cannot afford these accidents. Men of high skill are scarce already. We must not let accidents thin the ranks of men as vital to our national defense as those in uniform.

Therefore, for the hundreds of thousands of industrial workers whose safety is guarded with help of American Mutual safety consultants . . . we have continued to forge new weapons to fight accidents and have sharpened our vigilance.

Men familiar with the intricate operations of each major industry are among our safety corps. Working to *prevent* accidents, they also realize that preventive measures must not interfere with high-speed, close-tolerance work. Fortunately, they know production *methods* and production *men* as well as *safety*.

Recently, our consultants developed a new method of analyzing and interpreting accident records, making diagnosis and elimination of danger spots easier. This is but one of the new tools helping our policyholders guard their workers from danger.

WRITE FOR BOOKLET T, describing our accident-prevention work and specialized medical services intended to rehabilitate injured men for useful work. Address

American Mutual Liability Insurance Co., Dept. Q1,
142 Berkeley Street,
Boston, Massachusetts.



American Mutual
Works to Make All Work Safe



Is your
Telephone Set-up



"Popping
its Buttons"?

Is it keyed for your 1941 needs . . . or is it outmoded, inadequate to handle the demands you now make on it?

Right now is a good time to call your nearest telephone business office and say — "Send a representative to check on our service." We'll say "Certainly" . . . and the check-up will not cost you a cent or put you under the least obligation.

Why not call us — now?

THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY

ADVERTISING
PRINTING

THE CASE, LOCKWOOD & BRAINARD
COMPANY

85 TRUMBULL STREET
HARTFORD, CONNECTICUT

PHONE 2-2101

DOWD
WYLLIE
&
SON INC.

ADVERTISING ART
PHOTO ENGRAVING

HARTFORD, CONN.
ANN ST.

